

# American Artisan and Hardware Record

Sheet Metal—Roofing—Warm Air Furnaces—Stoves

Vol. 92, No. 10

CHICAGO, SEPTEMBER 4, 1926

\$2.00 Per Year

## Success Heaters

YOU know that the Warm Air Heating business has been making big advances in the last few years and that steel furnaces are in extra big demand.

The coming season is expected to be one of the *biggest years by far that the industry has ever known* and steel furnaces will be in preference.

The excellent performance of high quality steel furnaces and oil burning have created this demand.

You should get your share of this increased steel furnace business and you should guard your reputation and profits by selling nothing but the highest quality.

Success Heaters are high quality furnaces throughout—highest quality materials and workmanship and a design that has proven efficient and economical.

You can sell Success Heaters made of ARMCO Ingot Iron, more easily and with more profit than inferior makes—let us tell you why.

Write today for the 32 page Success catalog which gives illustrations and descriptions of the entire line.



**Success Heater Manufacturing Co., Des Moines, Iowa**

Warehouses

Canton, Ohio   Spokane, Wash.   Baltimore, Md.   Pittsburgh, Penna.   Saginaw, Mich.

*You can make big money installing*

# CALORIC

## SYSTEMS OF CIRCULATING HEAT

### Leaders in Warm Air Heating Field

More dealers have made more money selling and installing CALORICS during the last ten years than any other furnace on the market. The exceptionally high CALORIC quality and many exclusive features give Caloric Dealers a distinctive sales advantage over all competition.

### Nationally Advertised

The CALORIC was the first warm-air furnace to be nationally advertised on a big scale. During the past ten years more than \$1,000,000 invested in dominating campaigns have made the name "CALORIC" the most widely known.

The 1926 ads are now appearing in many leading publications.

### More Than 1,000,000 Boosters

More than 1,000,000 people in the United States, Alaska and Canada enjoy their homes in coldest weather because of CALORIC heat.



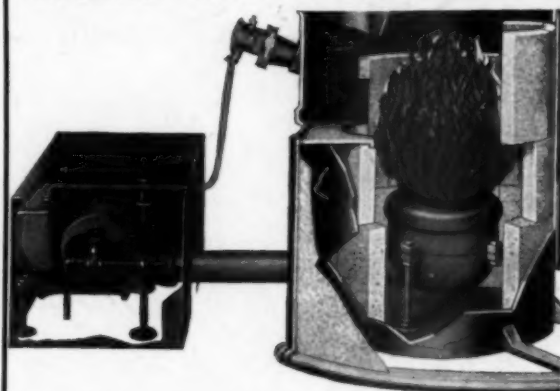
PIPELESS FURNACE

PIPE FURNACE

### The Most Amazing Liberal Terms Ever Offered to Heating Men

Our liberal terms enable you to buy NOW, pay LATER, and still get a big cash DISCOUNT. You do business on our capital. Mail the coupon TODAY for complete details.

### Monitor Electric Oil Burner



The most practical oil burner for warm-air furnaces. Simple, silent and entirely automatic. Electrically operated and temperature controlled. Easily installed. Sold through dealers only. Exclusive sales rights and territories now being granted. Full information mailed upon request.

SEND FOR FULL FACTS TODAY

### The MONITOR Furnace Company

107 Years of Heating Service

Cincinnati, Ohio

Complete stocks carried at the following points enable us to make prompt shipments:

Boston	Minneapolis	Salt Lake City
Philadelphia	Omaha	Spokane
Detroit	Denver	San Francisco
	Kansas City	

The Monitor Furnace Company  
Woodrow Street, Cincinnati, Ohio

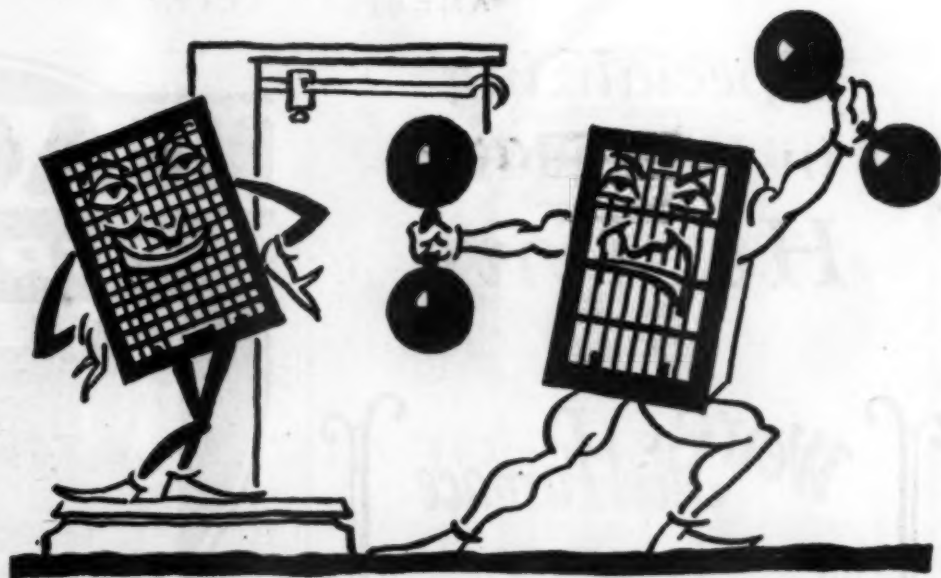
Please send complete information covering:

- ☐ Caloric Systems of Circulating Heat  
☐ Monitor Oil Burner

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

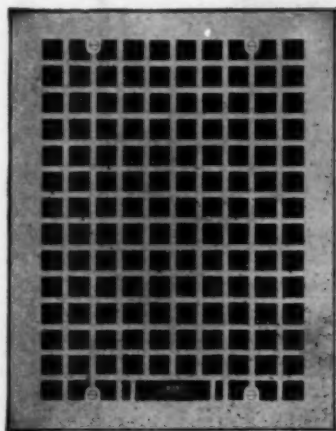


## Light and Strong

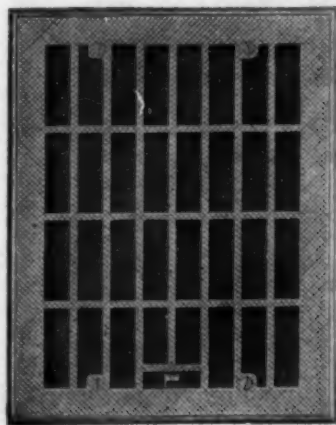
**Y**OU know the worth of a register which combines light weight with great strength. It's just this combination which makes our Semi-Steel so popular. Plus, of course, the expected T & B quality of workmanship and finish.

T & B Semi Steel Registers have a steel bottom and a cast face. They combine the advantages of the All-Steel and All-Cast. They are light to handle, yet the depth of the face adds strength and good appearance.

Of course, the bottoms have the exclusive T & B bevel for easy fitting. The faces are furnished in various designs and finishes including the popular Cobble. There is more to say about T & B Semi-Steel Registers than we can squeeze into this page. Drop us a line and let us tell you about them.



Style 60 (Semi-steel)



Style 80 (Cobble Face)

**TUTTLE & BAILEY MFG CO.**

*Makers of Registers for 80 years*

36 Portland Street, Boston

441 Lexington Avenue, New York

704 East 18th Street, Kansas City

1123-29 West 37th Street, Chicago  
Bridgeburg, Canada

# T & B Registers and Grilles



# Specializing in Warm Air Heating

with the

## Weir Steel Furnace

**M**ANY men have found that they could build a better business and make more money by doing Warm Air Heating exclusively—with the Weir.

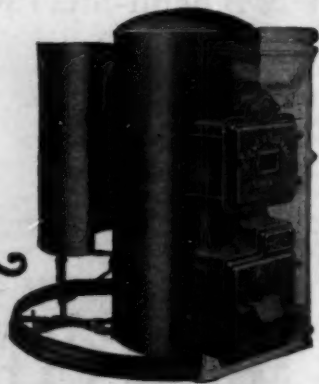
If you have thought of devoting your time and capital to Warm Air Heating exclusively or are interested in doing so we will be glad to tell you in detail why the Weir furnace will fit in better with your plans.

We cooperate with our dealers in every practical manner to help them secure the bulk of the furnace business in their territory.

*We will be glad to send  
our representative to call  
on you if you tell us to.*

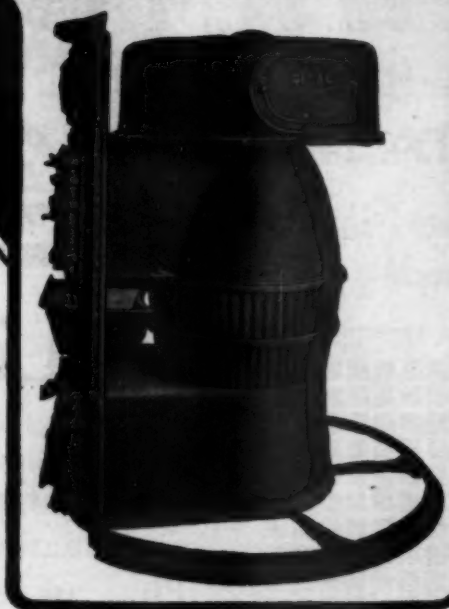


Write today for your copy of  
the **BOOK OF WEIR FACTS**



**The MEYER FURNACE CO.**  
Peoria, Illinois

# NIAGARA FURNACES



## The NIAGARA abounds with features that the Dealer wants

Founded on correct heating principles,  
and made as perfectly as human skill  
can devise.

Quality materials used—expert work-  
manship—assembly before shipping —  
every step is checked to produce a per-  
fect product—every part guaranteed by  
us against imperfection.

Quick installation—rapid turnover—co-  
operation in selling—all of these things  
mean increased sales for the Niagara  
Dealer, plus satisfied customers.

Write or wire today for our Dealer  
Sales Plan.

**The Forest City Foundry  
and Manufacturing Co.**

1220 Main Avenue

Cleveland, Ohio

Also Manufacturers of Monarch Furnaces





Look at these features  
of  
The "GEM" of the World  
and remember that the "GEM"  
IS COMPETITIVE-PRICED

### RADIATOR

The "GEM" radiator is made by a new and better method of moulding with green sand core. This makes a one-piece radiator of better quality and of absolute uniform thickness.

### COMBUSTION CHAMBER

The "GEM" has a combustion chamber that is extra heavy. It is designed correctly being properly proportioned for weight, distribution and air travel.

### FIRE-POT

The "GEM" Fire Pot is made in two sections, the lower part slotted. The "GEM" fire-pot is extra heavy and has extra deep tight fitting joints. Ribbed fire-pot is furnished instead if desired.

### WATER PAN

The water pan on the "GEM" is extra large and has a hinged lid.

### GRATES

"GEM" grates are clinker proof, easily operated and the most reliable on the market. The lever shaker handle puts action into entire grate. The "GEM" can be had with triangular bar grates if desired. Notice also the large correctly shaped ash pit and solid one-piece base attached, and then remember that every "GEM" is OVER-SIZE, also that the "GEM" is easy to case—plenty of room to attach casing to front to make quick and perfect fit.

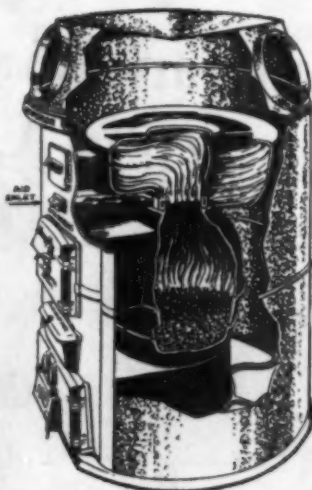
Dealers who have investigated this masterpiece of furnace construction have taken it on and are making greater sales and bigger profits with it. The "GEM" is the finest piece of furnace designing and construction you have ever seen. Its extremely low price for such high quality makes it the outstanding furnace value on the market. Get in touch with us now for exclusive agency proposition.



**ROBINSON FURNACE CO.**  
205 West Lake Street Chicago, Ill.



When writing mention AMERICAN ARTISAN—Thank you!



S. S. = \$ \$

THE SUPER SMOKELESS Furnace means dollars in your pocket. The dealer who sells them is in a distinct class—actually above competition. He can increase his business and get better prices for his work.

The SUPER SMOKELESS Furnace is the best investment a home owner can make. It eliminates the smoke nuisance, even with cheap soft coal, thus protecting health and property. It burns the smoke as valuable fuel, thus obtaining full heat value from the coal. This means a large saving in the amount of coal burned.

We are now telling the public the big story of clean, efficient and highly economical home heating through the medium of the SATURDAY EVENING POST. The result of this advertising is sure to be a nation-wide demand for the high-grade heating plant which radically cuts fuel costs. Big, new opportunities are being created for live-wire dealers who want to cash in on the merits of our SUPER-SMOKELESS Furnace.

Write TODAY for full information

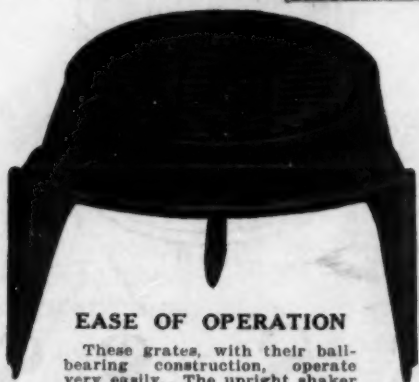
**UTICA HEATER COMPANY**

"Pioneers in Smokeless Combustion"

UTICA, N. Y. - CHICAGO, ILL.

## Simple and Efficient Grate Construction

A feature of **Vernois** Furnaces



### EASE OF OPERATION

These grates, with their ball-bearing construction, operate very easily. The upright shaker handle is extremely handy and convenient. A few simple backward and forward movements of this handle are sufficient to clean the fire bed. However, should any clinkers accumulate, the dump center affords their easy removal.

All Vernois Furnaces are made with both the ball bearing upright lever handle grate construction illustrated here and the duplex triangular grate construction which has given such satisfactory service.

Compare the VERNOIS part by part with any other heater for the same money. Notice the simplicity, the sturdiness, the effectiveness. Built for honest service—nothing else.

Write for the complete catalog and attractive net prices.



**Mt. Vernon Furnace & Mfg. Co.**  
MOUNT VERNON, ILLINOIS



**TRAVELING SALESMEN: Good territories open on commission basis**

*The furnace that  
will make your  
profits grow—*

**S**TUDY furnace construction more thoroughly than you have been and see if it isn't a fact that the men who do the most business and make the most profits are the men who sell **HIGH QUALITY** furnaces.

## "HOME COMFORT" Steel Furnaces

have been making satisfied customers and bigger profits for warm air heating contractors for many years for just one reason—**QUALITY**. This illustration shows the action of the "Home Comfort" gas and soot consuming feature. This is just one of the several new improvements on this favorite furnace and just one of dozens of real features that appeal to the man who wants a furnace that will give more efficient and longer years of the best type of service.

Write today for our complete catalog and our booklet—"The Joy of Home Comfort"

**ST. LOUIS HEATING COMPANY**  
2901-11 Elliot Avenue St. Louis, Missouri  
PITTSBURGH DISTRIBUTOR  
Wagener Bros., 3695 East Street



Mention **AMERICAN ARTISAN** in your reply—Thank you!

## ROBINSON SMOKE CONSUMER

FITS ANY  
FURNACE

SAVES  
FUEL

EASY TO  
INSTALL



PUT one on  
every furnace  
job—easy to sell  
and you make  
good profits.  
It is economical  
and will make bet-  
ter satisfied cus-  
tomers.

Write today for full details

**The A. H. ROBINSON CO.**

Makers of the ROBINSON  
STEEL FURNACES

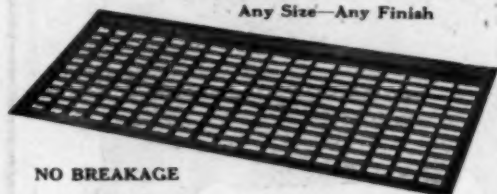
5103 Detroit Avenue

Patented CLEVELAND - - - OHIO

## "FABRIKATED" REGISTER FACES

For Cold Air Inlets—For Warm Air Outlets

Any Size—Any Finish



NO BREAKAGE

A METAL FACE AT A PRICE YOU CAN AFFORD TO PAY  
Every furnace man should know about "Fabrikated." Do you?

**INDEPENDENT REGISTER & MFG. CO.**

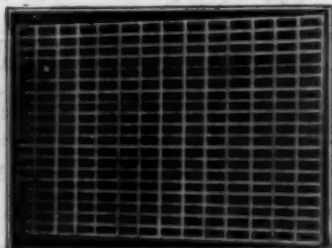
3741 E. 93d ST., CLEVELAND, O.

**82%  
Open  
Area**

## Eaglesfield EXTRA HIGH GRADE WOOD FACES

MADE by special machinery.  
Finest white quartered oak  
and High Speed Ball Bearing  
mechanism insures perfect con-  
struction. Specially designed groov-  
ing saw cuts all grooves exact size.  
Eaglesfield Wood Faces are stronger  
than others—the cross pieces  
are 1/16 inch deeper than those  
used in other faces.

Single orders or carloads promptly  
at fair prices. Write today.



**EAGLESFIELD VENTILATOR CO.**

918 DORMAN STREET

INDIANAPOLIS, IND.

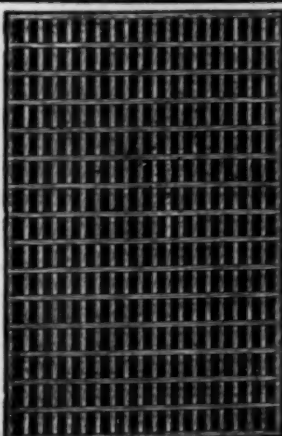
## AMERICAN WOOD REGISTERS

are

thoroughly inspected and be-  
fore leaving the factory must  
come up to the

**AMERICAN STANDARD,**  
which assures you the highest  
quality.

**THE AMERICAN WOOD  
REGISTER CO.**  
PLYMOUTH, IND.



# QUAKER Steel Furnaces

OIL BURNING  
COAL BURNING



*This specially constructed QUAKER  
OIL BURNING FURNACE  
AND QUAKER OIL BURNER  
solves that problem for you-----*

NOW with this COMBINED and SPECIALLY DESIGN-  
ED QUAKER STEEL OIL BURNING FURNACE  
and QUAKER OIL BURNER you can sell guaranteed warm  
air heating at a price that is less than the cost of a good  
mechanical oil burner alone.

Notice from the above illustration that this is a COMPLETE  
heating unit—not merely an oil burner attached.

We want to tell all about this NEW and SUCCESSFUL  
idea that is making money for hundreds of dealers NOW.  
Write today.

## QUAKER MFG. CO.

215A N. Michigan Ave.

Chicago, Illinois

QUAKER

MFG. CO.,

215A N. Mich. Ave.

Chicago, Ill.

Send this  
coupon  
today

Send literature and dealer proposition  
on ☐ coal ☐ oil furnaces.

Name .....

Address .....

City ..... State .....

MANUFACTURERS OF STEEL FURNACES FOR 30 YEARS

When writing mention AMERICAN ARTISAN—Thank you!



## Yes Sir, You can make money selling OAKLAND CIRCULATORS

No two ways about it, when you are selling an article like the Oakland Circulator, paying a good margin of profit, you are certain to make real money.

The Oakland Circulator is attractive, efficient and really fills the house with an abundance of heat in zero weather. Finished in grained mahogany, black, and nickel trim. Small home owners can easily afford it. You can afford to sell them. Write today for full details, price and discounts.

**OAKLAND FOUNDRY CO.**

Belleville, Illinois



Send for our  
illustrated book  
of order  
blanks

**NORTHWESTERN**  
REPAIRS  
FOR ALL  
STOVES  
FURNACES  
BOILERS  
*The Oldest and Largest*  
**STOVE REPAIR CO., Chicago**

## BOLTS

WE MANUFACTURE A COMPLETE LINE OF BOLT PRODUCTS, INCLUDING STOVE BOLTS, CARRIAGE BOLTS, MACHINE BOLTS, LAG BOLTS, NUTS, COTTER PINS, ETC. ALSO STOVE RODS, SMALL RIVETS AND HINGE PINS. CATALOG ON REQUEST.

**THE KIRK-LATTY CO.**

1971 W. 85th St. Cleveland, O.

## PATTERNS

FOR STOVES AND HEATERS

VEDDER PATTERN WORKS

FIRST-CLASS  
IN WOOD and IRON

ESTABLISHED  
1833

TROY, N. Y.

## PATTERNS FOR STOVES AND HEATERS

THE CLEVELAND CASTINGS PATTERN COMPANY  
CLEVELAND, OHIO

IRON AND WOOD

## STOVE PATTERNS

QUINCY PATTERN COMPANY  
QUINCY, ILLINOIS

WRITE today for our  
10-page book catalog  
which lists books of all kinds for  
the Sheet Metal Worker.

Say you saw it in AMERICAN ARTISAN—Thank you!

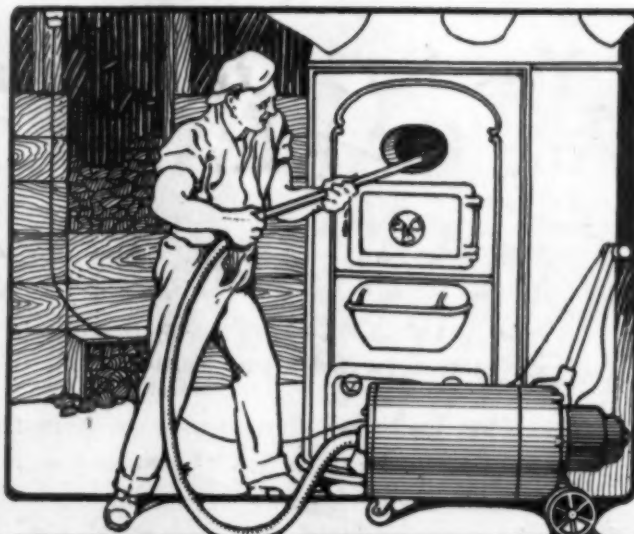


Catalogue  
No. 45

**F. Meyer & Bro. Co.**  
PEORIA  
ILLINOIS

Right Now—  
When You Wish  
Them Most—  
We Are Ready  
To Ship  
“Everything Needed  
in the Installation  
of Warm Air Furnaces”  
The Day We  
Get Your Order

**F. Meyer & Bro. Co.**  
1311-13 S. Adams St.  
Peoria, Ill.



## Clean Furnaces this NEW QUICK WAY!

TRY this new method for cleaning  
furnaces and flues. It's the biggest  
time and labor saver on the market.

Now, you can clean from five to eight  
furnaces a day by using the Sturtevant  
Portable Furnace Cleaner, and do a  
more thorough cleaning job.

By offering this cleaning service, you not  
only make a reasonable profit on the  
cleaning, but you have an excellent  
chance to supply extra or new parts for  
the furnaces if any are needed—also an  
opportunity to sell new furnaces if the  
old ones are badly worn.

The Sturtevant Portable Furnace Cleaner  
is simply and ruggedly built, has a power-  
ful suction, is easy to handle and can be  
operated from an ordinary electric light  
socket.

Don't delay investigating this new way to clean  
furnaces. Others are successfully using it. Write  
us for further information on the Sturtevant  
Portable Furnace Cleaner. Use the coupon  
below—NOW!



HYDE PARK,  
BOSTON, MASS.

B. F. Sturtevant Company,  
Hyde Park, Boston, Mass.

Dept. FC7

Without obligation to me, send along further informa-  
tion and price on the Sturtevant Portable Furnace Cleaner.

Name .....

Address .....

City ..... State .....

1478

**PROMPT  
DEPENDABLE  
SERVICE!**

**TIN PLATE**

for  
Warm Air Heater  
Pipe and Fittings  
LARGE COMPLETE  
STOCKS  
of  
DIVERSIFIED SIZES

**WRITE FOR  
PRICES TODAY!**

Stocks  
at  
CHICAGO  
PITTSBURGH  
NEW YORK

**TIN PLATE**  
C. S. DAVIS AND COMPANY, INC.  
37TH ST. AND IRON ST. CHICAGO, ILLINOIS.

Warehouses at CHICAGO PITTSBURGH-NEW YORK.

## A restful night on Lake Erie

on one of the great ships of the **C & B Line** makes a pleasant break in your journey. A good bed in a clean, cool stateroom, a long, sound sleep and an appetizing breakfast in the morning.

### Steamers

"SEEANDBEE" — "CITY OF ERIE" — "CITY OF BUFFALO"

Daily May 1st to November 14th

Eastern Standard Time

Leave Cleveland—9:00 P. M. | Leave Buffalo—9:00 P. M.  
Arrive Buffalo—7:00 A. M. | Arrive Cleveland—7:00 A. M.

\*Steamer "CITY OF BUFFALO" arrives 7:30 A. M.

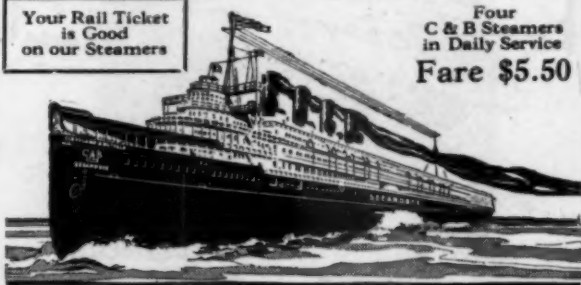
Connections for Niagara Falls, Eastern and Canadian points. Ask your ticket agent or tourist agency for tickets via C & B Line. New Tourist Automobile Rate \$7.50 and up.

Send for free sectional puzzle chart of the Great Ship "SEEANDBEE" and 32-page booklet.

**The Cleveland and Buffalo Transit Co.**  
Cleveland, Ohio

Your Rail Ticket  
is Good  
on our Steamers

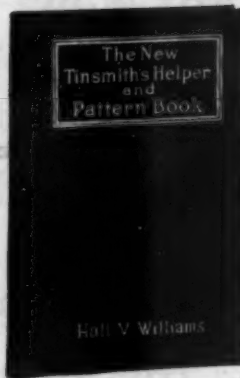
Four  
C & B Steamers  
in Daily Service  
Fare \$5.50



352  
Pages

247  
Figures

165  
Tables



Flexible  
Leather  
Binding

Measures  
4 1/2 x 5 in.

## One of the Best and Most Popular Books

on tinsmithing and elementary sheet metal work. This is the latest edition and the contents are new excepting the chapter on Mensuration, which has been re-arranged and amplified, and possibly some fifty pages of problems and tables which are classified to the phase of the work they cover.

### This Book Covers Simple Geometry and Every Phase of Modern Pattern Cutting

from the making of every type of Seam, Lap and Joint, to Conical Problems and Tinware, Elbows, Piping, Ducts, Gutters, Leaders, Cornice and Skylight Work and Furnace Fittings.

In fact an excellent all-around book for every man in the trade. Mr. Williams writes in an easy-to-read, helpful manner, giving you all the necessary details about each subject he handles.

You should add this widely read book to your collection now.

PRICE \$3.00

**AMERICAN ARTISAN  
AND  
HARDWARE RECORD**

620 South Michigan Avenue, Chicago, Ill.



# Helping Six Thousand Shops Sell Four Million Sheet Metal Prospects

Big job, isn't it? And it never could be done if ARMCO Ingot Iron wasn't the most economical sheet metal that money can buy. But people will buy "quality" when they know they'll save money that can be used to advantage elsewhere.

Millions of prospects have read the advertisement reproduced below—in Collier's, Saturday

Evening Post, and Good Housekeeping magazines. This means that Ingot Iron Shops have already sold more "quality work with quality iron"—with consequent bigger profits.

Write the Secretary of Ingot Iron Shops, Middletown, Ohio. He'll tell you how easy it is to make more money with the sign that tells your prospects *you* sell ARMCO Ingot Iron.



## You'll save money some day~ if you read now what this sign means

**N**IGHT and day, rust, the relentless destroyer of metal, is attacking your home. Gutters, leaders, flashing, cornices—all weather-exposed metal—provide a big target.

If they are not made of iron that wards off rust, they won't last long. Perhaps even now, every rain shows leaks in your gutters and downspouts.

When you repair, or when you build, give the job to the Ingot Iron man in your neighborhood.

You can easily identify his shop by the Ingot Iron sign reproduced above. He will save you money, for his work lasts. He prefers to use ARMCO Ingot Iron on all his sheet metal jobs. ARMCO Ingot Iron is the purest iron made. Practically free from the foreign substances that cause

ordinary iron and steel to rust, ARMCO Ingot Iron outlasts any other metal, considering its low cost.

Its use is true economy. Any extra cost is nothing compared to the money it will save you by doing away with frequent repairs.

The same purity that gives ARMCO Ingot Iron its long life enables this metal to take a coat of zinc that is purer than the galvanizing on steel. And so it is doubly protected against rust—first by its purity, then by its perfect zinc coating.

If you have any doubt as to whether it is worth while to insist on ARMCO Ingot Iron, remember this: Sixty cents of every dollar on a sheet metal job is spent for labor, regardless of what material is used. Invest that labor in ARMCO Ingot Iron that will last, rather than in an ordinary metal that will rust. See the man who owns the Ingot Iron Shop in your neighborhood for your next sheet-metal job.



For roofing, nothing equals ARMCO Ingot Iron. Its purity gives it the power to resist rust, and its protective zinc coating gives it double protection.



Cornices, to last over a long period of years, must resist the ravages of rust. ARMCO Ingot Iron, being practically free from the impurities that cause rust, is the best metal to use, considering its low cost.

More and more owners and builders are specifying ARMCO Ingot Iron for skylights, window frames, etc.—wherever metal must fight weather.



"Is it made of ARMCO Ingot Iron?"

Every day more and more people are making sure of enduring sheet metal work by asking this question.



Rain causes rust. Rust causes leaks. Leaks cause trouble and expense. Avoid this by using ARMCO Ingot Iron.

## ARMCO INGOT IRON

The Purest Iron Made

When writing mention AMERICAN ARTISAN—Thank you!

Published to serve  
the  
Warm Air Furnace,  
Sheet Metal, Roofing,  
Stove and Hardware  
Industries

Founded 1880

# American Artisan and Hardware Record

Yearly Subscription  
Price:

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Canada . . . \$3.00

Foreign . . . \$4.00

Published EVERY SATURDAY at 620 South Michigan Avenue, Chicago

EDITORIAL AND ADVERTISING STAFF

Etta Cohn  
J. F. Johnson

G. J. Duerr  
Frank McElwain

Eastern Representative: W. C. White, 1478 Broadway, New York City

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CHICAGO, SEPTEMBER 4, 1926.

\$2.00 Per Year.

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### AN ACHIEVEMENT

An explanatory note regarding service to readers of AMERICAN ARTISAN. This paper is now nearing the completion of a half century of service. For almost fifty years it has catered to the needs of the men in the industries which it represents. At no time during its long and successful career has AMERICAN ARTISAN been in a better position to render complete, adequate service to its readers than it is today. In addition to the matter contained in our regular weekly publication, we maintain Service Departments for the use of our readers. If you have a problem to solve, we courteously invite you to submit it to us for solution. In what better way can we learn of your problems than from you direct?

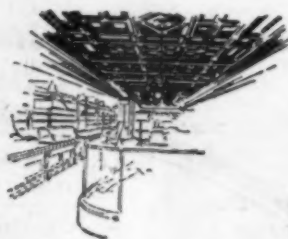


## Nationally known Building Materials



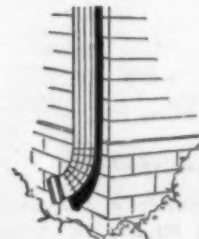
**WHEELING  
ROOFING TIN**

For permanence and economy use Wheeling 47 or 40 pound plates made of Copper-Alloy Steel (Ohio Metal) heavily coated with new tin and new lead by the Wheeling hand-dipping process.



**WHEELING  
STEEL CEILINGS**

Designs in great variety, accurately stamped in steel with Re-pressed Beads and Die-cut Nail Holes. Wheeling Steel Ceilings have been the nation's standard for over a quarter century.



**WHEELING  
HAND-DIPPED CONDUCTOR**

Hand-dipping in pure zinc after forming permanently imbeds this conductor pipe in rust-proof, weather-proof, age-resisting pure zinc three times as thick as any coating heretofore possible.

**F**OR over a quarter century Wheeling has supplied builders, contractors and architects with the finest quality Conductor Pipe, Metal Lath, Roofing Ternes and Steel Ceilings—products that outlive even the years of experience that have been put into their manufacture.

Nationally advertised! Nationally known! Wheeling building materials are found in construction of every size and description—from California to Maine. There is real profit in using or recommending products that are pledged anew each day to millions of people.

Obtain what you need quickly from the nearby Wheeling warehouse  
**WHEELING CORRUGATING COMPANY, WHEELING, W. VA.**

# Wheeling

NEW YORK  
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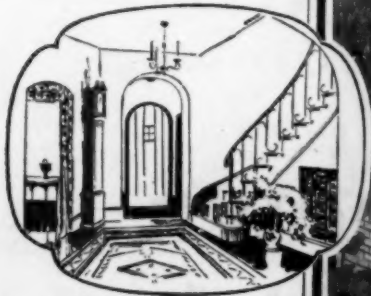
PHILADELPHIA  
KANSAS CITY

CHATTANOOGA  
CHICAGO

MINNEAPOLIS  
RICHMOND

When writing mention *AMERICAN ARTISAN*—Thank you!





Walls of plaster stay beautiful for a lifetime—and more, when built on a steel base, fire-safe too.



SHAPED  
IN STEEL

## A Beautiful Roof at Low Cost

The simple beautiful steel roof lend dignity and charm.

Roofs of steel with

This

advertisement appearing in

ARCHITECTURAL and BUILDING PAPERS is typical of the advertisements now being published by the SHEET STEEL TRADE EXTENSION COMMITTEE in 34 magazines reaching more than 10,000,000 subscribers.

These advertisements feature important uses of Sheet Steel, including every type of work done by Sheet Steel contractors—roofing, cornices and ornamental work, warm air heating and ventilating, skylights and spouting, metal ceilings and partitions, etc.

Make your shop Sheet Steel headquarters for your community, so that the public interest aroused in the advantages of Sheet Steel will be directed to your shop. Remember, this campaign is reaching your customers, whether you sell to industries, public institutions, factories, homes or farms.

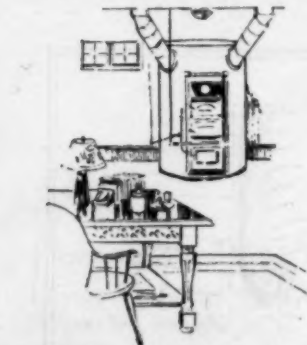
A complete set of direct-mail and newspaper advertising, especially prepared for the use of Sheet Steel contractors,

will be sent upon request to the SHEET STEEL TRADE

EXTENSION COMMITTEE, OLIVER BUILDING, PITTSBURGH,

PENNSYLVANIA.

**SHEET STEEL**  
FOR SERVICE



Heating plants of Sheet Steel provide both heat and moisture—cleaner, healthier.



Garages of Sheet Steel are uniformly fire resistant walls, doors and roof. And the design can be truly beautiful.



This trade-mark stenciled on galvanized Sheet Steel is definite insurance to the buyer that every sheet so branded is of prime quality—full weight for the gauge stamped on the sheet—never less than 28 gauge—and that the galvanizing is of the full weight and quality established by the SHEET STEEL TRADE EXTENSION COMMITTEE specification.



Buildings at Loyola University, Chicago, on Which Copper Has Been Used. Figure 1.— Observatory on Michael Cudahy Hall Covered with Copper. Figure 2.—Copper Eaves and Downspouts on This Building. Figure 3.—Copper Faced Dormer Window, Also Showing Copper Downspouts and Eaves. Figure 4.—Showing Copper Gutters on Roof of Building Entrance. All Copper Work Has Taken on Beautiful Patina Color.

## Loyola University Observatory Copper Roof Has No Repairs in 16 Years

*Has Beautiful Velvety Green Color  
and Shows No Sign of Deterioration*

By GEORGE J. DUERR

FROM out of the northwest come rumblings of discontent with the service given by the copper roof. The claim is that the copper will not stand up under the strain of long service. Examples are pointed to where the copper roof has failed in its function.

But no sooner do the signs of conflict make themselves manifest than there arise champions to the cause. The Joan of Arc of old or the Mussolinis of modern days are not all confined to the European continent. American industry, too, has its champions. The sheet metal

contractor is the savior of the sheet metal industry. Will they discharge their mission by learning their trade properly?

There is no foundation for the statement that the sheet copper roof will not endure. Examples are plentiful of sheet copper roofing that

has stood the test of time for two, three, four and more centuries without showing visible sign of deterioration.

In the accompanying illustration is shown several views of the use of copper on the buildings at Loyola University, Chicago, Illinois. One in particular is the copper roof on the observatory of the Michael Cudahy Hall.

This structure was erected in 1910. It is so situated that the moist breezes from Lake Michigan are constantly striking it. During its sixteen years of service the roof has had no repairs. It shows no signs of deterioration and the only effect the weather has had upon it at all is entirely to the credit of the roof. It has made the roof more beautiful than ever, for it has thrown over it a wonderful mantle of *Aerugo Nobilis* (Noble Rust) or patina, that soft, velvety green shade that copper takes on.

The gutters and downspouts of some of these buildings are also made of copper. These have likewise taken on that beautiful shade of green and can be seen from a long distance.

Instances of this kind when brought to the attention of prospective customers would go a long way toward dislodging the entirely false accusation that copper will not stand up under the years of strain.

The manufacturers and the sheet metal contractors themselves are to blame for this derogatory attitude of the public toward the copper roof wherever it does exist. The manufacturers are to blame for not determining whether a sheet metal man whom they allow to put the roof on is sufficiently skilled in that type of work to be able to do it correctly. The contractor is to blame for not learning how to put the copper roof on correctly, so as to avoid electrolytic action, and to allow for expansion and contraction.

There is nothing difficult about the erection of a sheet copper roof once the method is known. The sheet metal contractor must simply learn what to do and, more impor-

tant, what not to do when erecting the roof.

If the manufacturer would be more careful about whom he permits to erect his product, satisfying himself that the contractor is fully capable of doing the work properly, a great deal of the mischief would be avoided.

The public cannot be blamed for an adverse attitude toward a product which does not give the service that public was taught to believe it would give. The only criticism the public has is the service. When that is unfavorable, the judgment is bound to be unfavorable to the product under scrutiny.

The hardest thing to convince a person of is that there is a right and a wrong way to do everything. If done the right way, success without a slap-back is assured in most cases. If done the wrong way, there is no answering for the resulting consequences.

In the sheet metal industry there must be some way of determining whether a man is capable of doing his properly before he starts. There must also be some way of holding him responsible for the ill effects that accrue from poor workmanship. The industry cannot develop until these latter methods are discovered and applied. At the present time the entire industry is held responsible for the acts of individual members, who are permitted to roam at will in the green pastures, trampling everything before them as they go.

No industry can afford to put on great advertising campaigns with which to push its products until there is a certainty that those products will be properly installed once ordered. Any other course of procedure is indeed short-sighted.

#### **New Direct-Mail Blotter Campaign Jack Stowell Launches**

Jack Stowell, proprietor of the Ingot Iron Shop at 14 South La Salle Street, Aurora, Illinois, has just launched an extensive direct mail campaign for furnace and sheet metal business in that locality.

"Let Jack Stowell make it hot for you," is the slogan that he has

adopted, and judging by the three blotters that he is using, we'll be hearing of some mighty fine results before very long.

#### **National Sheet Metal Convention to Be Held April 24 to 29, 1927.**

The officers and directors of the Texas Association of Sheet Metal Contractors' Association held their semi-annual meeting at the Raleigh Hotel, Waco, Texas, Sunday morning at 10 o'clock.

The following directors were present: E. O. Wood and F. F. Haynie, Fort Worth; J. O. Walsh and H. Deane, San Antonio; J. W. T. Goslin, Austin; E. J. Railton, H. Stanyer and W. A. Richardson, Dallas.

At this meeting the dates for the National Convention were changed to one week later, April 24-29. This change was made due to the fact that the week of the 19th is Fiesta Week in San Antonio and all felt that it would be better not to have the dates of these two conflict.

#### **Illinois Travelers' Auxiliary Adds Twenty-four New Members in Two Months**

President H. R. Harrison of the Travelers' Auxiliary of the Illinois Sheet Metal Contractors' Association, has called a meeting of the directors for Monday, September 13th, 12:30 o'clock, in the offices of AMERICAN ARTISAN.

The Annual Roster is ready for the printers, and will be mailed to members and prospective members of the State Association, within the next week or two.

Twenty-four new members have been added to the Auxiliary roster since the last directors' meeting in July. Manufacturers and jobbers, selling to the sheet metal and warm air furnace trade in Illinois, either through traveling men or by mail are eligible to membership in the Auxiliary.

The membership fee is only \$5.00, which includes representation in the annual roster. To be included in the roster about to be mailed applications must be sent immediately to the secretary, Miss E. Cohn, 620 South Michigan Avenue, Chicago.



## Sheet Metal Ventilators Used on Pennsylvania Dairy Barn

*Adequate Provision for Free Air Circulation in Barn Avoids Disastrous Fires*

By C. H. THOMAS

**M**ANY disastrous fires have been caused by improper ventilation in barns where hay and grains are stored. For that reason the proper ventilation of large or small barns and graneries now occupies the attention of every intelligent builder. An eye to providing sufficient space for the air to circulate freely in and out of the barn is now being had.

than with wood, as it looks better, lasts longer and is more satisfactory in every particular.

These sheet metal ventilators are of large proportions and heavy. They are made to withstand the hardest kind of service and to give the best use possible under all kinds of conditions of weather, stress and service.

If more of this type material were



Large Pennsylvania Dairy Barn Equipped with Sheet Metal Ventilators.

The illustration herewith shows a battery of three sheet metal ventilators that have been placed upon a large dairy barn in Pennsylvania.

Small sheet metal ventilators are placed near the bottom of the building so that air can circulate to the top with no hindrance; this is a very fine application and instance of the proper ventilation of a cow barn, where much ensilage is used and feed and hay and other commodities used in a stable for cattle.

Larger and more pretentious barns are being built constantly, and the further study reveals that ventilation and proper air circulation can be better handled with sheet metal

used as ventilators, it is a fair bet that fewer fires would result, with the proper air circulation and further study along this subject by authorities is bringing to light the conditions that exist and are being rapidly applied as corrective measures.

The progressive sheet metal now sees the opportunity as it exists and gets out after the business with printers ink as a very wonderful asset and a sales campaign to aid him.

The only man who never makes a mistake is the man who never does anything.—*Theodore Roosevelt.*

### The Value of Having Contracts with Customers in Writing

A definite signed contract on every installation—this should be the aim and method of every furnace dealer. Definite, proper business methods never lost a cent for any man—and they have made many.

Such a contract should specify in considerable detail the items to be used—registers, fittings, regulators, etc.; size and location of warm and cold air pipes should be given; guarantees may be mentioned and last but not least, time and method of payment should be set forth.

If this procedure is followed, embarrassing misunderstandings with customers, friends and neighbors can be avoided. Collections can be made more easily and promptly. Orders can be placed with assurance that goods will be used and not left on hands as "dead stock."

These contracts constitute your best credentials when interviewing your friend the banker. Many dealers make the mistake of feeling that banks are only interested in loaning to very large corporations or wealthy individuals. This is far from the truth. If you have in your possession contracts with reputable people in your community showing work in process, and you show a real knowledge not only of the practical side of furnace work, but an appreciation of the necessity for definite understandings and agreements, few bankers will hesitate to grant you a loan to cover seasonal business needs.—*Lennox Torrid Zoner.*

### Pasha Hardware Convention to Be Held February 15 to 18

The Pennsylvania and Atlantic Seaboard Hardware Association, Incorporated, will hold its twenty-sixth Annual Convention and Exhibition in the Philadelphia Commercial Museum on February 15, 16, 17 and 18, 1927.

Any further information may be obtained from Sharon E. Jones, Secretary-Treasurer, Wesley Building, Philadelphia.

# Showing Layout of Design for Copper Vent Church Tower

*Process Quite Complicated and Requires Some Technical Training in Drafting*

By O. W. KOTHE, Principal St. Louis Technical Institute

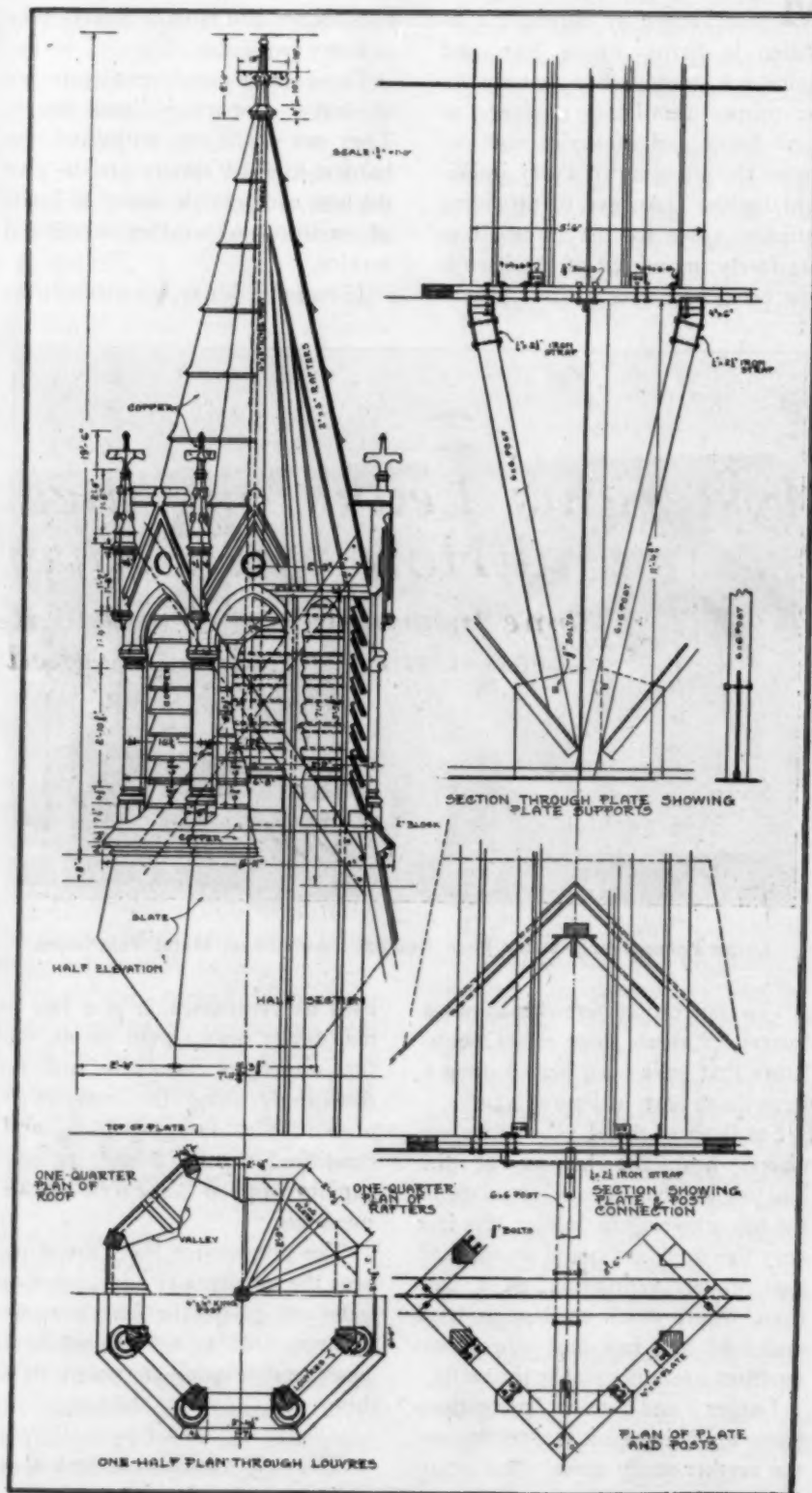
**I**N this drawing we show an enlarged detail of the architect's drawing of the vent tower of a church plan elevation shown some time ago. Here are also the structural details in their different stages and how the woodwork must be anchored in order to support the tower, as well as wrapping the sheet metal work around the woodwork as an exterior finish and protection.

Sheet metal men who are well experienced in this sort of work know it is no child's play to get out this work in a neat and efficient manner.

There are thousands of mechanics who have done nothing but hang gutters and scrape tin roofs all their lives and when they enter business they immediately place a sign on their trucks and shop windows that they do all sorts of architectural cornice work, skylights, heating and ventilating, exhaust and blow-piping and such other work.

But in reality very few of them ever dabble in such work and the mere sign is only a blind to make themselves feel bigger. Without technical training in drafting, and more business coaching they never could hope to handle work as we show on a contract basis, or even satisfy the architect they had to do it themselves. On some of these miters in this tower some real interesting pattern drafting is required.

It is much easier and quicker to develop such work by geometrical methods than it is to cut and fit and trim and throw a few pieces away and then cut and fit some more. The building up process of construction as applied in sheet metal work has been discontinued by all the progressive shops. Where men can get out the work in the flat and know absolutely that every miter will fit, it makes the assembling a pleasure. The shops that are unable



Copper Vent Tower Design

to do this must naturally expend more time and effort and this costs them really more money to do such a job than it costs the men who actually know how. A great many such men say it is worth that to get the experience, but that is not a good way to get that experience because you don't learn anything from it. The next job you get will have to be whittled out in the same way and it doesn't gain you a thing.

So in our problem we have a first roof intersection where the tower is placed on a hexagon and then we have the sill which forms a hexagonal mould. On this sill we have an octagonal base with columns and capital. The base portion would be the plinth and is octagon, while above it it transforms into a circle and this takes considerable knowl-

edge in hammering out circular work. The same holds true with the capital and above that the octagonal shape again starts in. The arch itself is made into a chamfer on a 45 degree angle as our sectional view shows. Then the finals are placed on the corner of the octagon and the pediment moulds butt miter into them. This makes a very particular miter and is really on a double angle which requires a keen knowledge of geometry.

The roof of these gables or pediments is also made to butt against the spire and to fit on the mould so a proper intersection must be made and if not it makes it difficult in assembling, for patching as well as in soldering. Work that does not fit good will crack in the joints, owing to improper connections and caused by the expansion and con-

traction of the metal. The louveres themselves are interesting, especially as we get toward the top which requires additional drafting so the inclined louveres will fit into the pointed arch. Here again men can cut and whittle the shapes if they have enough patience, but it is much quicker and easier to develop them by rules of geometry.

There is enough work on this tower to keep many a reader busy for several weeks, doing nothing else but detailing and laying out the patterns, if he is not especially skilled at it. Men who are skilled can reduce this to a matter of days because such a job will run him to quite a sum of money and because it is a piece of art the architect ordinarily sees that his designs and instructions are carried out to the letter.

## Mysterious Leaks on Sheet Metal Roofs and How to Discover Them

### *Some Information on How to Renew Eave Edges—Using Specially Designed Paint Pail*

By L. S. BONBRAKE

**M**Y introduction to black iron sheets, painted for roofing, was in 1876 at New Lisbon, Ohio, while driving cross-country from Salem, Ohio, to the Columbiana County farm to install a new 8-hole range for that institution.

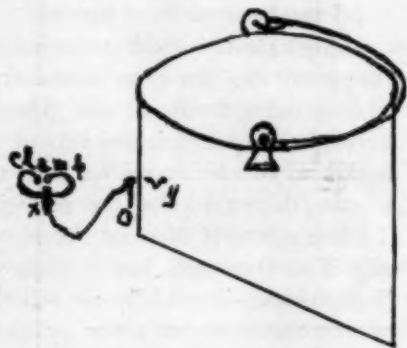


Fig. 1

Black iron sheets painted for roofing were such a great novelty in those days that I stopped off to examine the procedure of putting them on and found a man painting

the sheets by hand. He used a 4-inch brush to work with in a shed where the sheets were united with an inch cross seam.

From that time on I continued to investigate iron roofing, inquiring into its secrets, longevity and actual worth. Charcoal black iron sheets as used in those days were soft and flexible, seaming as nicely as tin, without crack or break.

During the early 80's steel sheets appeared, after which roofing and corrugating establishments sprung up in the mid-west and other localities as fast as mushrooms after a spring shower. Then price-cutting came into vogue. Any sort of iron or steel sheets appeared to answer, and work was haphazard.

Paint was applied with rolls, when with a flip of the wrist and a few turns of a crank, a sheet was painted in an instant. Paint was cheapened by the free use of cheap driers, whitening and water. Every

expedient was used to cheapen a roll of roofing or a crate of corrugated iron. For a time it appeared as if this particular industry were ruined by fly-by-night concerns.

However, as always happens when an industry has a solid foundation, there were a number of men engaged in the industry whose faith

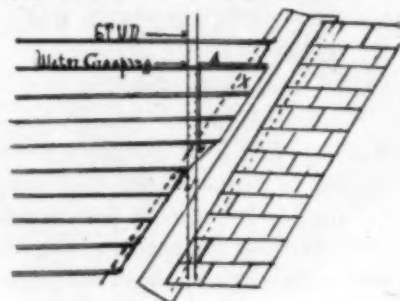


Fig. 2

in the business could not be shaken, and who in the 90's formed the Steel Roofing Association. From the time of the formation of this association conditions began to



change for the better. The undesirables were soon eliminated, while the keen, broad-minded men of this association and others like it subsequently formed, have brought out ideas and devices which produce the best possible make of steel sheets.

This action laid the foundation

avoid. Once a piece of metal starts to rust, there is no stopping it, regardless of paint or what-not that is applied to it.

Eight pounds of oxide of iron to one gallon of boiled linseed oil makes an excellent paint for tin or steel roofing. However, I should

coats of paint on sheet metal requiring a certain shade or color. This is especially true when the metal has been thoroughly coated with oxide of iron graphite or yellow ocher. At first standing seam sheet metal roofing was frequently painted with alternate strips in different colors that would blend and harmonize with the colors of the building.

Good results and permanency do not always depend entirely upon the kind of paint used as the frequency and consistency of painting are also factors of importance.

Paint that is applied too thick will blister and crack. A steel roof should be painted immediately after it is laid. If laid in the fall of the year, a coat of paint should be applied to it the following spring; then another coat should be applied in a year. From then on the roof should receive a coat of paint at intervals of from three to five years. The condition of each individual job will dictate the frequency of painting. For best results the paint should be put on with a 4-inch brush and worked well into the metal. The painter is especially admonished from standing in the center of a seam length and smearing paint on the roof with a whitewash brush on the business end of a 10-foot pole. Standing seams require that care be exercised when they are being painted, and the paint should be worked well under the fold of the seam. In order to do this, the painter must be quite near the seam.

#### Importance of Paint Bucket

Straight, level-bottom buckets were frequently used for paint containers when painting the metal roof. These have often resulted in the loss of a bucketful of roof paint, as well as creating a hazard for the painter. To lose a bucket of paint occasionally is bad enough, but to receive broken bonds is much worse. Both of these contingencies are avoided by using a handy paint bucket.

The paint bucket illustrated in figure 1 may be made at the shop in height and width as needed. The bottom is beveled to between  $\frac{1}{3}$  and  $\frac{1}{4}$  pitch. Two cleats "Y" are soldered to the sides of the bucket,

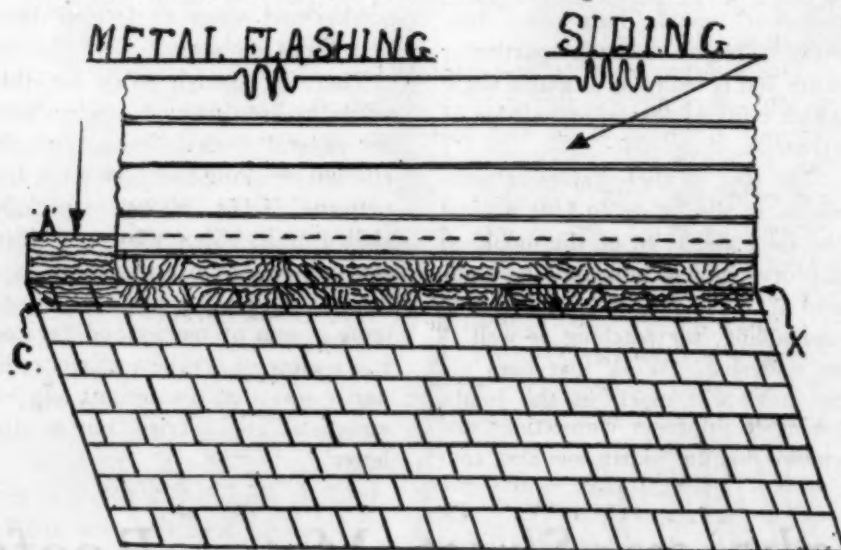


Fig. 3

for the solid basis upon which the steel industry rests today. A story appearing in the June 5, 1926, issue of *AMERICAN ARTISAN* by J. C. Eckel and describing "A Few Misconceptions" is one of the most comprehensive stories describing what I have been trying to bring out that I have ever read. I know from my own experience that what Mr. Eckel says is in accord with the facts. I admire his straightforward honesty. If galvanized iron should be painted, the roofer wants to know it. He also wants to know the proper time for doing the painting, as is told by Mr. Eckel.

#### Relating to Painting

Some contractors have advised that the first coat of paint to be applied to a tin or steel roof after the roof is laid should be withheld until the roof turns red, giving the rain a chance to wash off the grease and dirt.

I suggest painting the roof as soon as it is completed and thoroughly in place. The grease referred to is merely part of a harmless flux; while red means rust and rust is what we are all trying to

not care to say that that mixture is the best, after having found equally as good merit in graphite. Yellow ocher, too, has good wearing and protecting qualities. I have used all three of these on tin and steel roof and have found them to give good service even after a roof has had a quarter of a century wear and exposure. Having changed my residence from Ohio to Illinois, I am not in a position to state how much longer these roofs held on.

On account of the unsightly appearance of the dead, faded red color of oxide of iron on the sheet metal roof, many prospects have refused to consider the sheet metal roof, and yet when shown a blend of the three above-mentioned colors in dark gray, soft light brown, near black or other possible shades that appeal to the fancy of the prospect, the contract was often secured for sheet metal without much difficulty. Of course an explanation was made to the effect that these blends were in no way detrimental to the sheet.

Occasionally when necessity requires acidulous or pungent fillers may be used in a finishing coat or

each slightly past center as shown on the low side. A spring clamp is made that will slip down over the standing seam and hold there. A swivel pin passes through the center of the clamp, having hole through its lower end "X" to which a small chain may be attached. The opposite end of the chain is provided

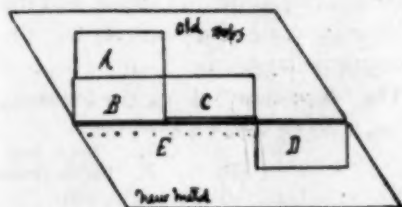


Fig. 4

with a lock "O" or pin to engage a cleat "Y."

#### Mysterious Leaks and Their Origin

The origin of leaks encountered on a building are frequently hard to trace. One cause of mysterious leaks has been due to the carpenter allowing the end of the siding nearly to touch the bottom of the metal shingle flash of an abutting roof, as indicated by the weather-board "X" in figure 2.

Water flowing down the metal flashing of the roof can very easily catch onto the top edge of the weatherboard, when it extends too far over the flash, as at "X." The water frequently creeps along the top edge of such a weatherboard until it reaches an obstruction, such as a stud, when its course will be diverted downward. Then possibly some other obstruction again changes the course of the water, so that when it eventually shows up on the ceiling or wall, it is possible that the source of the leak may be hard to find, as it may be located at a considerable distance from the point where the water appears inside of the house. A magnifying glass in the attic may show stain on the wood locating its entrance. A leak of this character may be entirely avoided by cautioning the carpenter or his foreman.

One of the causes of leakage at the point of contact of a shed roof abutting against the side of a weatherboarded building is that coal soot

and dirt blowing into the corner of the metal flashing is held there when the siding fits down too close on the metal. By the action of the weather, the accumulated soot will turn to an acid, which will eat through the metal in short order, thereby causing a leak hard to remedy without taking off the siding.

This difficulty may be prevented by not allowing the siding to be dropped down close to the roof flashing, as shown at "A" figure 3 and corner bend "X," as space of between  $\frac{3}{4}$  and 1 inch is left between the bottom edge of the siding and the bend "X" or corner of the flashing. This will allow the soot and dirt to be easily swept from its lodgment and will also permit painting the metal which will assure longevity of the roof. Note the hem or fold formed on the bottom edge of the flashing strip at "C." This will stiffen the edge and prevent warp or buckle, keeping the edge down smooth and firm.

#### Renewing Eave Edges

If a building covered with sheet steel roofing is located near a railroad round house or gas plant, the sulphur fumes will probably have some action on the metal. It is a mystery why it should effect the eave end of the sheets, for from 8 to 14 inches up the roof, leaving the body of the roof intact. I have met up with cases similar to this in Decatur, Springfield and Beardstown, Illinois. All of these cases were treated in the same manner and were entirely satisfactory.

The method of repair is illustrated in figure 4 and described as follows: Find the highest point along the eave to which the damage extends. Flatten the seams to above that point, reaching sound metal; chalk a line across the roof and cut the damaged portion away. The tong up to a perpendicular 1-inch of the old roof, as at A. After which measure from "A" to the eave and add  $1\frac{1}{2}$  inches to the new insert in width. One-half inch for the top flange "B" and an inch for turning down to nail. After which form the high flange "A," down over the lower "B," as shown at "B." Nail

along the length of the strip at "E" when the whole is malletted down smooth at "D" then cement with a roof cement of known merit. A narrow seam will lay smoother and closer than a wide one.

During the past several years there has been a wonderful and earnest effort made to improve the permanency of steel roofing. Undoubtedly those responsible for this movement have succeeded. When the rolling mill people and the steel roofing fabricators join forces, they are sure able to cry, Eureka.

#### J. C. Thomas Wants to Know More About Fans

TO AMERICAN ARTISAN:

I am mailing you my check for subscription which should have been sent some time ago.

I like AMERICAN ARTISAN very much, especially the warm air heating section, which has been very helpful to me.

I notice that you have had considerable to say about the fan in connection with warm air heating systems. As I am not very well posted on this subject, I should like to get into communication with some fan people so that I can learn all about fan usage.

J. C. THOMAS.

Corinth, Mississippi.

#### Accurate Metal Products Company Moves to New Maywood Plant

Accurate Metal Products Company, First avenue and Chicago & North Western railway, Maywood, Illinois, is located in a new plant where it plans to double its output this year over last.

The company is incorporated for \$25,000 and manufactures stampings, screw machine parts, tools, dies and fixtures and radio parts. The company expects to purchase equipment to accommodate growth. C. A. Russell is president; L. M. Podboy, vice-president; E. P. Russell, treasurer, and T. M. Stickler, secretary.



# Miles Says, "It Not Only CAN Be Done But It Is Being Done"

## Gives Specific Instance of a \$2,500 Warm Air Heating Job That Almost Went Begging

By J. C. MILES of the Warm Air Furnace Fan Company

**T**HE warm air furnace industry is assuredly coming to the front.

Everyone who is familiar with the scientific principles of healthful heating, knows that the warm air (convection) heating principle is beyond all doubt, the most satisfactory form of heating.\*

Practically every reputable authority states that the radiant heat from a radiator is objectionable as well as unhealthful. Recommending instead of the direct radiator, what is known as the indirect radiator, so that the heat will be convection (Hot Air) heat instead of radiant heat. One very reputable authority states that the reason direct radiators are used is that the convection radiator is more expensive, "Because of the increased cost of installation and operation." All of which means, in spite of the radiator man's propaganda, that the radiator system is used because it is cheaper than convection (Hot Air) heating.

This last statement is an irrevocable fact. Almost every conscientious authority points to the superiority of convection (Hot Air) heat. But notwithstanding, the opposite view is prevalent among the general public. Worst of all is the Warm Air Furnace man himself, and it has been my experience that the furnace man himself is the hardest to con-

vince. Just recently I addressed a Furnace Manufacturers Convention of Salesmen and Dealers, setting forth these startling facts in detail with lantern slides of diagrams, illustrations, etc. Then the next day an impressed visitor at this meeting "checked up" on one of the representative dealers, saying, "Weren't those startling facts brought out at yesterday's meeting, about Warm Air Heating?" This intelligent representative Warm Air Furnace dealer remarked, "Oh, well, he is selling fans, that stuff sounds good but you could not make an owner see it."

I am fully aware that this is the attitude of a great majority of furnace men and so long as this attitude prevails in their minds, just so long will they be deprived of the handsome profits derived from sales made on merit and not on price.

In Dickens' "Tale of Two Cities" he has a character by the name of Cruncher, if my memory serves me right, who claims that his wife, the one of all people who should be for him, was always "flopping agin' him." While I am sure I would not rob a grave, I confess I feel a little like Cruncher felt. The ray of sunlight is, they are not all "Mrs. Crunchers."

Many have grasped this forward movement and are "putting their shoulders to the wheel" with the result that this superior heating system is being installed in our most elaborate homes, an example of which is that of Mr. R. S. Weis, the manager of the Sunbeam Heating Company of Saginaw, Mich. Mr. Weis "rang the bell" to the extent of a \$2,500 contract where two heat outlets are upwards of 88 feet right and left from the center of the heater casing.

The following is a description of

the heating system in detail, and the accompanying drawing shows the complete lay-out:

The "dope sheet" shows the following Heat Loss Calculations

	Ft.	Cont. K	B.t.u. loss per degrees
Sq. ft. glass	910	1.00	= 910
Sq. ft. wall	6324	0.25	= 1581
Sq. ft. ceil'g	4252	0.2	= 851
Infiltration	52224	0.02	= 1044

Heat loss per degree temp.

diff. ....	4386
Temp. rise .....	70

Total heat loss ..... 307.020  
307.020

Grate area ..... = 7 sq. ft. approximately.  
45.000

307.020 × 55  
Fan size ..... = 240.000  
80

C. F. H. 240.000  
Basement pipes are ..... = 8  
300

sq. ft. × 144 = 1152 sq. ft.  
Reg. Temp. 80 + 65 = 145° F.

Two Sunbeam furnaces having 3.69 sq. ft. grate area each, and two No. 1000 Standard Miles Automatic Furnace Fans were used.

The message this carries with it is that it not only CAN be done but it is being done and that the general public is only too willing to be sold on this better class home heating system.

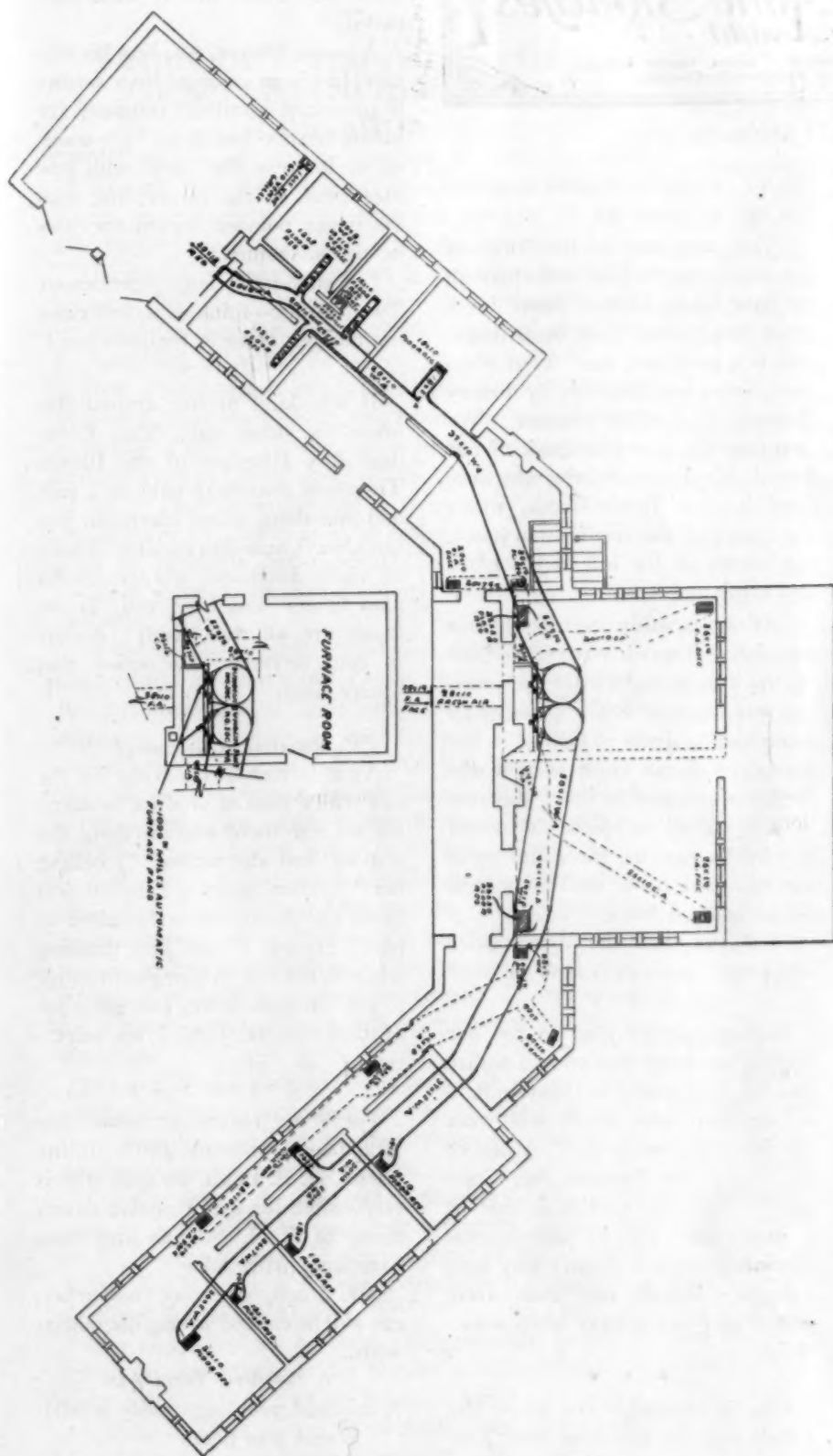
Respectfully submitted for the good of the cause.

Let the other fellow know what the "live" men in the business are doing. Send us for publication plans and details of the unusual warm air furnace jobs—new and replacements—you install.

\*(In most cases, heating by convection heat is more satisfactory than heating by radiant heat. This is especially true if the occupants must sit in close proximity to radiators. It is sometimes necessary to place shields in front of the radiators to cut down the radiant heat.)

(Allen & Walker's Heating and Ventilating textbook.)





This Is Basement and Floor Plan of the House Referred to in Mr. Miles Story on Facing Page. In This \$2500 Furnace Heating Job Two Furnaces and Two Fans Are Used.

### E. C. Dunning, Inc., to Manufacture Kwik-Lok Furnace Pipe and Fittings

E. C. Dunning, William F. Porch and Ross O. Aton, are all well known as live wires, and undoubtedly, the news that they have incorporated under the name of E. C. Dunning, Inc., will be welcomed by the trade. Therefore, we are quoting extracts from a letter received from E. C. Dunning, under date of August 31st:

#### E. C. Dunning

"On Friday, August 13th, E. C. Dunning, Wm. F. Porch and Ross O. Aton filed articles of incorporation for the new corporation of E. C. Dunning, Inc.

"We have received our papers and will start operating on September 1st. We have purchased all of the manufacturing equipment, patents and rights to manufacture Kwik-Lok furnace pipe and fittings. We will also engage in the business of light stamping work and other sheet metal products.

"A building site has been purchased at 41st Avenue and Mitchell Street, Milwaukee, Wisconsin, and we have our plans drawn and ground broken for the erection of a new and modern manufacturing plant.

"We have also taken over all of the unfilled jobbers contracts and orders from The Dunning Heating Supply Co., who will continue as strictly jobbers of warm air furnaces and supplies in the Milwaukee district. However there will be no connection financially or otherwise between the two corporations, with the exception that the old corporation will act as jobbers in the Milwaukee district for Kwik-Lok furnace pipe and fittings.

"The officers of the new corporation are as follows:

"E. C. Dunning, President and Treasurer.

"Wm. F. Porch, Vice-President.

"Ross O. Aton, Secretary.

"We expect to be in our new plant and operating by November 1st, and until the completion of the same we will be located at 131 Reed Street."

# Random Notes and Sketches

By Sidney Arnold

"The essence of humor is sensibility; warm, tender fellow-feeling with all forms of existence."—Carlyle.

Edited in Sidney Arnold's Absence by —?—

Sidney Arnold is on his vacation. He doesn't hesitate to tell all he knows about the rest of us, so I'm going to tell one that I just heard about him.

Jack Stowell the other day said to me: "One man I'm never going to have lunch with is Sidney Arnold. Excuse me from ever being the guest of an editor at dinner."

Rather surprised, I said, "Why, what is the matter? Was Sidney broke when he took you to lunch the other day?"

Jack replied, "I don't know whether he was broke or not, but he sure put a blue pencil through about half my order!"

\* \* \*

Ralph Blanchard and Hugh Doherty were discussing the careless way in which their trunks and suitcases are usually handled by the railroad companies.

"I thought I had a very cute idea for preventing that once," said Blanchard, smiling reminiscently. "I labeled each of my bags, 'Handle with care—China'."

"And did that have any effect?" asked Doherty.

"Well, I don't know," Blanchard answered, looking foolish, "You see they shipped the whole darned lot off to Hong-Kong."

\* \* \*

Funny how we neglect our neighbors. North Chicago is only about twenty-five miles from Chicago. Maybe that is why our friend, C. G. Watrous of the Double Blast Manufacturing Company, has been neglecting us. It was good to see Mr. Watrous the other day when he dropped in to pay a long promised call.

\* \* \*

The following letter from our friend, Francis S. Walter of the Battle Creek Furnace and Roofing Company, is so good that I can't re-

sist the temptation to print it so that you can all enjoy it:

"You have sent us the ARTISAN for some months past and although we have taken another paper for a great many years, your trade magazine is a good one, too. Your Random Notes and Sketches by Sidney Arnold are a great pleasure. We also note the way you speak of our friend, Mr. Frank Ederle, who once lived here in Battle Creek, where the center of the city is in a valley, the homes on the hill to the north and south and west.

"At our monthly meetings of our association it was hard to climb back up the hills at night after the meeting was over, so Frank gave us all something to drink to help us to our homes. I do not know what it was but it acted wonderfully, because after I started to climb, the power in what he gave us, forced me up at a great speed, never slackening until I had reached home.

"I do not think that it was gasoline either, but only Frank knows."

\* \* \*

We are always glad to see our friends and hope that you all realize that the latch string is always out.

One man who never will wear out his welcome is J. C. Miles of the Warm Air Furnace Fan Company. The only trouble is that he is such a busy man he doesn't come often enough and doesn't stay long enough. He is one man from whom you can always learn something.

\* \* \*

Charlie Glessner—you know him—he's with the Excelsior Steel Furnace Company—unlike most men, at one time rather welcomed a summons for jury service. Now you can't get Charlie to serve on a jury if there is any possible chance of his being excused.

Charlie was called for jury duty

in Sandwich, Illinois, which was his home town, and this is what happened:

A young lawyer, pleading his first case, had been retained by a farmer to prosecute a railway company for killing twenty-four hogs. He wanted to impress the jury with the magnitude of the injury, and with his finger pointed toward the jury he almost shouted:

"Twenty-four hogs, gentlemen. Twenty-four—think of it, just twice the number there in the jury box!"

\* \* \*

It was kind of live around this office the other day. Yes, President Roy Harrison of the Illinois Travelers' Auxiliary paid us a call, and one thing about Harrison, you can always hear him coming. That's all right, Harrison, we are always glad to see and hear you, as we know are all the "Rudy" dealers in your territory. We enjoy that hearty laugh.

\* \* \*

## Effective Advertising?

As a farmer was leaving for the city with a load of produce he asked his wife if there was anything she wanted, and she replied, "I believe not." When about a hundred feet from the house the wife called to him, "Henry, I was just thinking while in the city you might drop in to one of those stores and get a jar of that 'Traffic Jam' I see advertised."

\* \* \*

For some reason or other, this little poem made me think of my friend, H. F. Pugh, the man who is responsible for the attractive advertising of R. J. Schwab and Sons Company, Milwaukee.

Mr. Pugh, you may remember, can still be classed among the newly-weds.

## A Hundred Years Ago

A hundred years ago today a wilderness was here;

A man with powder in his gun went forth to hunt a deer;

But now the times have changed somewhat—are on a different plan,

A dear, with powder on her nose, goes forth to hunt a man.

## The Editor's Page

### Future of Warm Air Heating Closely Allied to Installer Education

**T**HE warm air furnace installer of today is confronted with three distinct demands which are constantly being made upon his time and energy. In popular jargon: He is up against a triple proposition.

The degree of success attained in the discharge of the responsibilities of each one of these three requisites determines not only the degree of success attained in the business, but its actual life.

First, that business must have expert salesmanship. Secondly, there must be present within the organization executive ability. Thirdly, there must be mechanical ability—sufficient intelligence to recognize the necessity of using good materials and workmanship, backed by moral character and stamina to enforce the demand for good workmanship and materials.

These three things are absolutely essential to every business.

In the case of a large corporation, these three essential qualities are almost never embodied in any one man; the organization is so constituted that responsibility is delegated. But a study of the history of any successful organization will reveal either that the founder was a man having the three essentials himself or that he had a latent genius for selecting men to work for him who had the peculiar ability which he needed and sought.

In the case of the furnace installer, rarely if ever, are these three qualities found in one man. If the man is a good salesman and a good mechanic, chances are he is lacking in executive ability. If he has mechanical ability, he is perhaps a poor business man. In any event the business suffers from a lack of one or more of these essentials.

It's expecting a great deal of a man with perhaps only a grammar school education or less to excel in these three directions, or even to prepare himself unaided to develop outstanding ability in them.

For this reason the suggestion made by W. E. Lamneck in *AMERICAN ARTISAN* recently and reiterated by R. C. Walker at the Mid-year meeting of the Western Warm Air Furnace & Supply Association is particularly pertinent and to the point.

The idea advanced by these two gentlemen is that a school be started which the furnace installer could attend, either in person or by correspondence. In such a school he could be instructed in the fundamentals of the particular phase of business conduct which he lacks; namely, if he is a good salesman and lacks mechanical and executive proficiency, he could attend the school and receive instructions in the proper installation of furnaces and in the proper business methods to employ; if he is a good mechanic but lacks a knowledge of the use of proper sales and collection methods—which is very

often the case—he could attend the school and receive instruction in salesmanship and in making collections.

It is fully agreed that in order to be of service to the installers, the school would have to have instructors who are themselves practical men. Therefore these instructors would be recruited from the ranks of manufacturers, jobbers and installer, selected for their expertness in their particular field on the first count, and for their ability to impart to others their knowledge and observations on the second count.

The establishment of such a school is an excellent move in the right direction. If the warm air heating industry is to get anywhere at all, the furnace installer, the man who separates the home owner from his money, must be instructed in the things he lacks to make his business a success.

The installer must have some reliable source of information and knowledge about his own business if he is to build into the industry a reputation for reliability and accuracy. Without this, the research work that has already been done will count for very little in the way of increasing the profits of the industry. The resistance offered at the outlet spigots of the industry to the free flow of goods must be cut down to the absolute minimum, and one of the most certain ways of reducing this resistance is to educate the installer in his work to a point where he takes a keen interest in each and every detail of it. By so doing the industry will naturally adjust itself to the new conditions, the unfits will be driven out of the industry and those remaining will raise the level to a higher plane.

### What a Little Buyers' Strike Can Do

**T**HERE has been a great deal said about buyers' strikes. It is entirely possible to have beautiful little drawbacks to business in the sheet metal industry.

For instance, the contractor is running along at a normal gait, doing a good volume of business. He sells quality materials and does quality workmanship. His work is standing the test. His customers are satisfied.

Then along comes an individual who sees prosperity in the sheet metal industry. He thinks it a good place to set up a little competition, make a fat roll and get out. The thought of rendering a service in exchange for the expected reward never occurs to him.

He enters the business. He takes work at a figure so low that he is unable to put in the time necessary. He lacks the experience and the spirit to do good work.

In a word, he is the bad apple in a barrel of good ones. His presence in time ruins the whole industry. He does not do work that will stand up. Consequently he gives the industry a bad name. The customers or buyers go on a strike, so to speak, and the cycle is complete.



**R. J. Schwab & Sons  
Company, Milwaukee,  
Erect Addition to Plant**

R. J. Schwab & Sons Company, manufacturers of Gilt-Edge Furnaces, have acquired property adjacent to their plant and are building an addition to their factory.

A three-story frame building, formerly occupied by the Jurack

Pattern Works, has been razed, and is being replaced with a concrete structure, providing additional space for the sheet metal shop, and for storage. It is planned to have the new building ready for occupancy by October.

This year marks the fiftieth anniversary of the R. J. Schwab & Sons Company.

## **Canadian Manufacturers Show American Made Furnace at Exposition**

### **Taylor-Forbes Co. Display Torrid Zones at British Columbian Exhibition**

Mr. J. A. Thurlow, Western Sales Manager of the Lennox Furnace Company, manufacturers of Torrid Zone Furnaces, has been kind enough to send in this picture and story.

This well displayed group of warm air furnaces was shown by the Taylor-Forbes Company of

The Taylor-Forbes Company are manufacturers of steam and hot water boilers, and kindred lines. Though they do not manufacture warm air furnaces, they are doing a large jobbing business in this line, buying Torrid Zone furnaces in car lots.

The progress that has been made



**Exhibit of Torrid Zone Furnaces at British Columbia Exposition.**

Vancouver, B. C., at the recent British Columbian Exhibition held annually at Vancouver. As the accompanying picture shows, this exhibit was both neat and well arranged and only the various lines of warm air furnaces handled by this progressive concern were shown.

by the Warm Air Furnace Department of the Vancouver Branch has been almost phenomenal. This growth has been caused by advocating at every step the installing of furnaces of ample size for each job, and then giving the best installation possible.

This practice has given them the success in the warm air field they deserve.

### **"Doc" Weatherly Disposes of His Business But Will Not Retire**

Fifty-six years ago, C. S. Weatherly, affectionately known to the furnace trade as "Doc" Weatherly, The Real Furnace Man, apprenticed himself as a sheet metal worker to the Wilder D. Foster Hardware Store of Grand Rapids, located on the present site of the Pantlind Hotel.

There were several changes made from time to time in the personnel of the firm until Mr. Weatherly and Mr. Frank E. Pilte remained, doing business under their joint names.

Twenty years ago Mr. Weatherly bought out the furnace end of the business, conducting it until August of this year, when he sold out to the Grand Rapids Furnace and Heating Company, 500-506 Monroe Avenue N. W.

Mr. Weatherly, while he is past seventy-five years old, is still a young man, active and full of pep. He was one of the ring leaders in the activities at the outing of the Grand Rapids Heating and Sheet Metal Engineers, held recently. He is by no means ready to retire from active business, and therefore has decided to stay with the Grand Rapids Furnace and Heating Company, confining his efforts to the sales end of the business.

#### **To AMERICAN ARTISAN:**

*Enclosed find check for \$2.00 for which send to THE STERLING SERVICE SHOP, 5 West Columbus Street, Mt. Sterling, Ohio, your journal for one year.*

*I have just established a shop here and expect to do a general line of sheet metal work, plumbing and heating.*

*I would be glad if some of the manufacturers in this territory would send catalogs.*

*Very truly yours,  
THE STERLING SERVICE SHOP.*

## Advertisement Illustrations Should Center Attention Immediately

*Illustration Shown is Good Because it Attracts the Eye and Centers it Upon the Product Advertised*

**S**TRIKING or unusual illustrations are considered good advertising practice, providing they pertain strictly to the subject matter in hand.

The whole object is to attract and to center attention as quickly as possible upon the article advertised. It is, therefore, easily understood that an illustration which attracts attention but does not center it upon the object advertised has little value to the advertiser, although it may go

so far as to produce a smile or a hearty laugh from the reader.

The accompanying warm air furnace advertisement, taken from the *Ravenna, Nebraska, News*, is a good example of what is meant by an illustration that not only attracts attention, but centers it upon the furnace at once.

Although it is felt that a warm air furnace advertisement to home owners which bases its appeal upon health and economy is fundamental-

ly correct and vastly superior to other forms of appeal, it cannot be deemed that the advertisement shown has a definite appeal whose effect will be far-reaching were it not for the forceful illustration. It brings to the fore a subject about which the home owner is not apt to give much thought at present unless some such appeal as that shown jogs his memory.

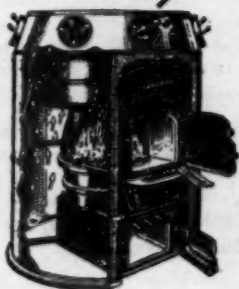
Practically every manufacturer and wholesaler has a live advertising department, conducted by men who make a study of advertising in all its phases. They are always ready to help their dealers and the dealer will do well to take full advantage of every help offered.

Now is the time to go after business and go after it with vim and vigor. Good, peppy, well illustrated advertising in your local newspapers is always a big business booster.



### What will you say to your Furnace next winter?

*moist heat*



Being unfriendly with your furnace next winter, and the winters to follow, won't make it heat the house, nor will it keep it from consuming twice as much fuel as need be.

Instead of having just an ordinary furnace, the thing to do is, put in a Nesbit Standard Furnace—the perfect heating plant that you know will be satisfactory. There are at least a dozen superior features about the Nesbit that make it most efficient and economical. Just ask any user.

Plan new comfort and new pleasure for yourself and family next winter. Come in and let us show you Nesbit Standard Furnace Superiority. Deferred payments can be arranged.

**Nesbit** **STANDARD**  
*{Oversize}*  
**Furnace**  
**HLAVA HDW. CO.**

#### Recipe for Ink for Making Permanent Labels on Zinc Plates

Sheet metal contractors, no doubt, often found occasion to label zinc plates for one reason or another. They may also have been kindred in their activities in this respect by not being able to obtain an ink that would remain impervious to the elements.

The following is a recipe for ink for zinc which proves useful for permanent labels:

Two parts by weight of verdigris (acetate of copper)

Two of sal ammoniac (ammonium chloride)

One of lampblack

Thirty parts soft water.

The chemicals should be incorporated in a little of the water, and the remainder added. Keep in a glass bottle tightly corked, and shake frequently while using, as the lampblack tends to separate.

Scour the zinc slightly with sand or emery paper. Write with a steel or a quill pen, and a new pen will be needed with each using.

Pieces of zinc that have been exposed to the weather long enough to be graded (oxidized) can be written on with pencil, and will grow clearer with time, and last for several years.—*The Flower Grower*.



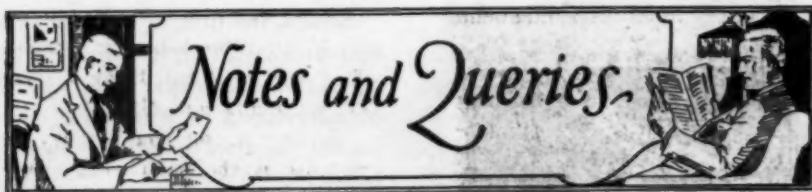
### No Excuse for Not Knowing Principles of Salesmanship

As the art of selling goods is often referred to as "the oldest profession in the world," it is a little surprising to find that it was not until 1875—only fifty years ago—that the records of the Library of Congress show that the first book on "Salesmanship" was written. By 1879 six more books had been published on the subject; by 1889 the list numbered forty-two and, ten years later, 202 books had been added, while at the present time there are more than 500 copyrighted

volumes dealing with this subject.

In spite of this, however, it was not until 1923 that the word "salesmanship" was listed in the Century Dictionary and more recently than that in other similar reference works.

But as there are an even score of American magazines devoted principally to salesmanship, twenty-five manufacturing companies which provide salesmanship training and sixty-one American colleges and universities that offer courses in this profession, there can be little valid excuse for lack of familiarity with the principles of a "new" art which dates back to the dawn of history.



#### "Chicago" Cook Stove.

From Roanoke Hardware Company, Roanoke, Illinois.

Can you tell me who makes the "Chicago" cook stove, formerly sold by Jacob Retterer and Sons of Chicago.

Ans.—Auto Stove Works, New Athens, Illinois.

#### Sheet Metal Screws.

From Hero Furnace Company, Sycamore, Illinois.

Please inform us who makes sheet metal screws.

Ans.—Parker-Kalon Corporation, 352-362 West 13th Street, New York City.

#### "Baker" Gas Range.

From Lake Street General Repair and Sheet Metal Shop, 730 East Lake Street, Minneapolis, Minnesota.

Can you tell us who makes "Baker" gas ranges?

Ans.—Baker Stove Works, Belleville, Illinois.

#### "Spence" Boiler No. 25.

From West Side Hardware, 1518 Wesley Avenue, Evanston, Illinois.

We should like to know who makes the "Spence" boiler No. 25.

Ans.—Kellogg-Mackay Company, 1351 West 37th Place, Chicago, Illinois.

#### Mica.

From Youman Brothers, Red Wing, Minnesota.

Please tell us where we can purchase mica.

Ans.—Eugene Munsell and Com-

pany, 542 South Dearborn Street; and L. L. Fleig and Company, 325 West Ohio Street; both of Chicago, Illinois.

#### "Economy" Stove No. 170.

From Youman Brothers, Red Wing, Minnesota.

Kindly inform us who makes the "Economy" Stove No. 170.

Ans.—Comstock-Castle Stove Company, Quincy, Illinois.

#### 1/2-Inch Corrugating.

From R. E. Dill, Alexandria, Nebraska.

Who can do 1/2 or 1/4-inch corrugating for me?

Ans.—C. G. Hussey and Company, Pittsburgh, Pennsylvania, can furnish 1/2-inch corrugations up to 72-inches long, not heavier than 20 gauge.

#### "Belle Oak" Heater.

From Henry C. Kamholz, West McHenry, Illinois.

Who makes the "Belle Oak" heater?

Ans.—This was made by A. J. Lindemann-Hoverson Company, Milwaukee, Wisconsin, who have discontinued its manufacture.

#### Zinc Screw Tops.

From C. M. Amspoker, East Liberty, Ohio.

Please advise me where I can buy four inch zinc screw tops.

Ans.—Berger Brothers Company, 237 Arch Street, Philadelphia, Pennsylvania.

## Retail Hardware Doings

### Arkansas.

At Hozen the Kocourek and Son hardware store has been damaged by fire.

### Illinois.

The Meier Brothers Hardware Store of Henry have divided their business. Gus Meier has taken over the lighter hardware and opened up a shop in the Yanachoski Building. The Junior Meier Brothers, Charles and Lewis, will continue business in the present location.

Chester A. Ingels has purchased the hardware store of Hersman and Parker on East Main Street, Mt. Sterling.

### Indiana.

The Columbia Hardware Company of Fort Wayne has moved from 131 East Columbia Street to its present location across the street. Many changes have been made in the display of goods as well as the addition of new departments, including a complete kitchen utensil department.

### Iowa.

The Scarville Hardware Store at Scarville has been sold to the Acme Sales Company of Estherville.

### Kansas.

Guy Teegardin is the new owner of the Simms Hardware Store at Eureka.

Cole and Miegel have sold their hardware business at Ellsworth to Everett Brothers.

Alfred Wilson and Bill Goodwin have purchased the Glasgow Hardware store at 1126 Military Avenue, Baxter Springs, from Robert Glasgow and will operate under the name of the Home Hardware Store.

### Michigan.

The Norton Hardware Store of Lansing is now located in their new store at 305 South Washington Avenue.

The John Mulder Hardware Store has moved to the Deichman Block on East Avenue.

### Minnesota.

Olson Hardware and Implement Company of Brandon have sold their business to Enil E. Beigh and Theodore Foslien.

H. E. Kircht and J. E. Bechtle have opened a hardware store at Montevideo.

### North Dakota.

Miesen Hardware and Implement Company of Cayuga have been incorporated with a capital of \$25,000. Incorporators are: J. C. Miesen, Roy H. Rue and Frank Haas.

### South Dakota.

The S. J. Davidson Hardware Store of Wauboy has been damaged by fire. The loss is estimated at \$20,000.

### Wisconsin.

H. C. Cuddebach is adding a new front and other improvements to his hardware store at Hudson.

Christ Hansen has sold the Rice Lake Hardware Store at Rice Lake to F. Ripplinger and Son.

Everett Dodge has purchased the interest of his father in the Pioneer Hardware Company at River Falls.

A. Meinhardt has opened a hardware store at New London.



# Athletic Goods Department Proves Excellent Substitute

*Article Based on Interview With J. F. Van Deren,  
President Van Deren Hardware Company, Lexington*

By RUSSELL R. VOORHEES

**W**HEN a hardware jobber finds that some department in his business is dropping off what is the wise thing to do? Many jobbers have asked themselves that same question and many of them haven't been able to arrive at much of an answer to the question. At first thought it would seem to be the wise thing to do to drop the line like one would a hot potato. But that is only half the answer. Down in Lexington, Kentucky, the Van Deren Hardware Company faced a falling off in business in one department. They solved it in a very satisfactory way.

"We formerly did a large business on guns and ammunition, but about two years ago that business began to drop off," said J. F. Van Deren, President of the company. "We found after a short time that the gun and ammunition department was not profitable. We couldn't drop the department, but we cut it down to the very minimum.

"However, that cut into our gross business and our net profit so I began to look around for something to take its place. I felt that when one department fell off it would be good merchandising to add another to take its place, and so that we would at least retain our usual volume of business. We added sporting goods and fishing tackle departments, thus giving us two new departments to take the place of the gun and ammunition department that seemed to have about run its race.

"There is considerable business from universities and institutions on sporting goods in Lexington and vicinity and since these institutions buy in large quantities and expect to get wholesale prices even when they buy from retailers, we made it

a point from the first to go after this business. A first we sold to teams, but we found that this resulted in losses in some instances, so we immediately eliminated that practice. Now we sell only to the universities, churches, schools and institutions themselves. Every team



J. F. Van Deren, President Van Deren Hardware

regardless of the sport has some backing. We sell to the backers and in that way have eliminated all losses.

"We make a keen effort to get this business and are getting it. We give the institution the same price that we would give the retailer if we sold to him and that is greatly helping us to get the business. Most of our business is obtained by getting in personal contact with the managers and coaches of the various teams and finding out what they want. Then we take it up with the

proper authorities and make the deal.

"Many retailers do not like this sort of business, because the business always wants a rebate and the retailer cannot very well give a rebate and come out whole on the proposition. We handle it and give the team the benefit of better prices, make a legitimate profit ourselves and at the same time are not taking away any business from a retailer that he wants himself.

"I have found that quality merchandise is the stuff that sells to this class of trade. We have never been able to show them anything that is too good for them to buy. They do not want to pay prices that are out of all reason, but at the same time they do want the best quality that it is possible to give them. That makes it very attractive business to handle.

"We carry a stock of the different items in the sporting goods line so that immediate needs can be satisfied without waiting for shipments. Practically all of this business, however, is shipped direct to the buyer from the manufacturer so that we do not have to bother with the handling of it at all. That makes it especially attractive to handle.

"This year which is the second year that we have been handling sporting goods in this way we are doing 75 per cent more business on it than we did the first year and the new department started off very well even for the first year. That gives some indication of what such a department can do for a sporting goods jobber. We find that we have no losses by selling only to the institution and not to the team and in addition we get our money in a reasonable length of time. Altogether it is very satisfactory business.

"Another advantage of it is that it is a year around business. We go from season to season in the sporting goods line; whereas guns and ammunition was a very limited season seller. Practically the same customers are customers from season to season so there is just one set of prospects to work with. Satisfy them once and you are sure to get them back again the next season for the articles that they will need.

"We also inaugurated a fishing tackle department when we found our gun and ammunition department was slowing up. We are doing very well in that and between it and the sporting goods department we are doing more than we did with the gun and ammunition department; so you see it was a good move.

"We sell our fishing tackle almost exclusively to retailers, it being impossible to merchandise this in the same way that we merchandise the sporting goods. Every season we make it a rule to have something new to feature. I have found that this puts pep into the business and makes the retailer interested when you call upon him. He soon learns to know that your house is the house with the new things and that gets business in this line. Feature something new and don't be afraid to feature it, is my policy. It is a business getter.

"That is what we did when we found one of our departments slowing up. We just looked around, found out two departments that we didn't have, but that went with our line and added them. Today we are better off than before the gun and ammunition department slowed up. It looks as if it was an ill wind that didn't give us a new idea."

#### Getting Better All the Time

TO AMERICAN ARTISAN:

Enclosed find check for \$3.00 for renewal of my subscription to AMERICAN ARTISAN for two years. It is getting better and better all the time.

Very truly yours,

ROBERT BOLLEN.

Miles, Iowa.

#### Half Century in Hardware Business Is Record of O. P. Schlafer

In Appleton, in the same block on West College Avenue, Otto P. Schlafer of the Schlafer Hardware Company, has been in business for a half century.

Mr. Schlafer was at work as usual on Monday, August 7th, and in the evening he was given a banquet by about eighty employes and their wives, at Hotel Northern.

Mr. Schlafer talked briefly of his career in the hardware business. He has been engaged in the hardware



O. P. Schlafer

business for 54 years, four years of which were spent at Menominee Falls, Wisconsin, before coming to Appleton. The store first occupied another site on the same block.

Mr. Schlafer has taken a prominent part in the activities of the Wisconsin Retail Hardware Association. He has served the Association on many committees and as president in 1900 and 1901.

The two mutual insurance companies affiliated with the Wisconsin Retail Hardware Association—the Hardware Dealers' Mutual Fire Insurance Company and the Wisconsin Hardware Limited Mutual Liability Insurance Company—have been fortunate in having Mr. Schlafer as president ever since their organization.

As a token of the esteem in which he is held by his associates and em-

ployees, he was presented with a gold watch by A. A. Wettengel at the banquet. Beautiful floral baskets were sent to Mr. Schlafer by P. J. Jacobs of Stevens Point, Secretary of the Wisconsin Retail Hardware Association, and J. W. Jones, President of the Mohr-Jones Hardware Company of Racine.

George Nixon was in charge of the banquet arrangements and acted as master-of-ceremonies. He and several others paid a high tribute to Mr. Schlafer.

Mr. Schlafer's grandson, Wilmer Schlafer, Jr., played several violin selections, accompanied on the piano by Miss Esther Mau. Mr. Nixon also sang several solos, and with Mrs. Nixon, rendered several duets.



National Hardware Association convention, Atlantic City, New Jersey, October 19, 20, 21, 22; headquarters, Ambassador Hotel; James T. Fernley, secretary-treasurer, Philadelphia.

American Hardware Manufacturers Association convention, Atlantic City, New Jersey, October 19, 20, 21, 22, 1926; headquarters, Ambassador Hotel; Charles F. Rockwell, 342 Madison Avenue, New York, secretary-treasurer.

Pennsylvania and Atlantic Seaboard Hardware Association, Philadelphia Commercial Museum, February 15, 16, 17 and 18, 1927. Sharon E. Jones, Secretary-Treasurer, Wesley Building, Philadelphia, Pennsylvania.

Illinois Retail Hardware Association convention and exhibit, Hotel Sherman, Chicago, February 15, 16, 17, 1927. Leon D. Nish, 14 North Spring Street, Elgin, Illinois, secretary.

New England Hardware Dealers' Convention and Exhibition, Mechanics' Building, Boston, Massachusetts, February 22, 23 and 24, 1927. George A. Fiel, Secretary, 80 Federal Street, Boston.

Michigan Sheet Metal and Roofing Contractors' Association, Pantlind Hotel, Grand Rapids, March 1, 2 and 3, 1927. Frank E. Ederle, Secretary, 1121 Franklin Street, S. E., Grand Rapids.

Texas Sheet Metal Contractors' Association, Hotel Adolphus, Dallas, Texas, April 24 and 25. Harry Stanyer, Secretary-Treasurer, 2422 Alamo Street, Dallas.

National Association of Sheet Metal Contractors, Adolphus Hotel, Dallas, Texas, April 26, 27, 28 and 29, 1927. W. C. Markle, Secretary, 850 West North Avenue, Pittsburgh, Pennsylvania.

**INSIST UPON  
DIECKMANN  
ELBOWS AND SHOES**



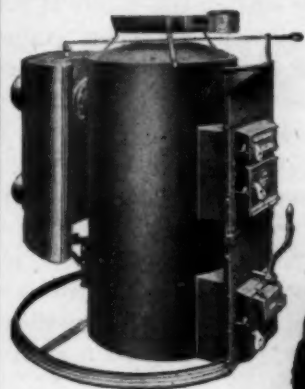
*F. Dieckmann*

TRADE MARK

**ALL JOBBERS HAVE  
THEM OR CAN GET  
THEM FOR YOU**



**The Ferdinand Dieckmann Co.** P. O. Station B,  
Cincinnati, Ohio



**Here's Why It Sells!**

—this heavier steel, seamless furnace is  
guaranteed for ten years!

**CLEAN  
HEAT**

**MOIST  
AIR**

Complete stocks  
carried in Phila-  
delphia, Pitts-  
burgh, Albany  
and Kansas City

**WATERBURY  
SEAMLESS FURNACE**

REG. U.S. PAT. OFF. PIPE OR PIPELESS



**W**HEN you sell the Waterbury you intro-  
duce a standard of home heating efficiency  
and comfort unequalled by any furnace.

Most all steel furnaces are gas tight for awhile. But cement cracks, rivets loosen, and seams open sooner or later. The Waterbury has no seams, no rivets, no joints. The body of this heavier steel furnace is welded into one solid, seamless, sealed piece. It is PERMANENTLY gas tight. You sell everlasting satisfaction when you sell the Waterbury SEAMLESS Furnace.

Send for our latest catalog, "The Furnace Man's Handiest Manual." Besides giving full details it contains practical information never given in a catalog. Simply mail us the coupon.

**THE WATERMAN-WATERBURY CO.**

1122 Jackson Street—N. E.  
Minneapolis, Minn.

Send me complete details of your agency proposition  
and copy of "The Furnace Man's Handiest Manual."

Name.....

Address.....

When writing mention AMERICAN ARTISAN—Thank you!



# Present Steel Demands Are Numerous--- Future Buying Still Limited

## Pig Iron Market Is Quiet---Nonferrous Metals Register Strong Recovery

**A**LL the tests of production, shipments and incoming orders fix the fact that consumption of steel is moving ahead steadily on about the same basis that has made the recent season unique in the volume and stability of demand.

If recent buying has been robbing the market of future possibilities, there are no trustworthy indications to show it.

With some exceptions, buyers are placing orders only as they feel the immediate need and are keeping stocks to the lightest proportion. This makes for a large number of individual sales.

A few of the larger consumers in western territory have been contracting against expected needs for several months ahead.

While producers are accepting orders for the fourth quarter at present prices, it is only the relatively few who are taking advantage of this.

Operations are virtually unchanged at 80 to 85 per cent with the Youngstown district showing some gain this week.

The Steel corporation is exceeding 85 per cent. The Bethlehem Steel Co. is putting in two additional blast furnaces this week at Sparrows Point and at Johnstown.

### Copper.

The price now is 14.37½ cents Connecticut but buying is light. Users are well covered for a month ahead and producers well booked.

Some shading of brass and copper products prices is being done but base prices are unchanged since August 30.

### Lead.

Strength in London has been aiding the domestic lead market the past few days and prices have been holding steady at 8.90 cents New York and 8.65 cents East St. Louis.

The upturn in London has been

more than had been expected and as a consequence shading in the New York market has disappeared.

Supplies, however, are understood to be a little freer.

The American Smelting & Refining Co. is holding to its contract price of 8.90 cents New York.

### Zinc.

The market on prime western gradually has been growing stronger, with the aid of only moderate buying.

However, it has been apparent that business conditions were in favor of strength, and the market abroad also has been a little stronger though not actually buying common metal here.

Shipments are of good size. Fluctuations have been small.

### Tin.

The New York market was in no way stimulated by the advance abroad and selling pressure in face of continued small demand has put prices in this market ⅛ cent lower on prompts and about ⅜ cents lower on futures.

At the call on the New York Metal Exchange three 25-ton lots of August-September shipment from the East, equivalent to November delivery New York, were sold at 64.25 cents and later 25 tons at 64.20 cents, as compared with asking prices at the opening at 64.75 cents.

Straits tin for prompt delivery has been sold at 65.75 cents and 65.87½ cents, September at 65.62½ cents down to 65.37½ cents, and October was offered without takers at 65.00 cents. 99 per cent tin for prompt delivery is offered at 63.87½ or 63.75 cents for delivery from steamers afloat.

### Old Metals.

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows:

Old steel axles, \$17.50 to \$18.00; old iron axles, \$24.00 to \$24.50; steel springs, \$18.50 to \$19.00; No. 1 wrought iron, \$13.00 to \$13.50; No. 1 cast, \$16.00 to \$16.50, all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 9 cents; zinc, 5 cents, and cast aluminum, 19 cents.

### Solder

Chicago warehouse prices on solder are as follows: Waranted 50-50, \$41.50; commercial 45-55, \$38.50, and plumbers', \$37.50, all per 100 pounds.

### Pig Iron.

At Pittsburgh the pig iron market continues inactive, and no change is expected until after Labor day. Some furnaces continue to quote a minimum of \$18, bessemer, obtaining small filling-in lots at that price. Certain Mahoning valley furnaces are reported to be piling iron rather heavily.

One Shenango valley furnace is drawing on its stockpile.

The market on No. 2 plain is unchanged at \$17.50 to \$18, valley.

At Chicago spot buying of pig iron specialties is fairly active, and piecemeal contracting for northern No. 2 and malleable continues at a steady rate.

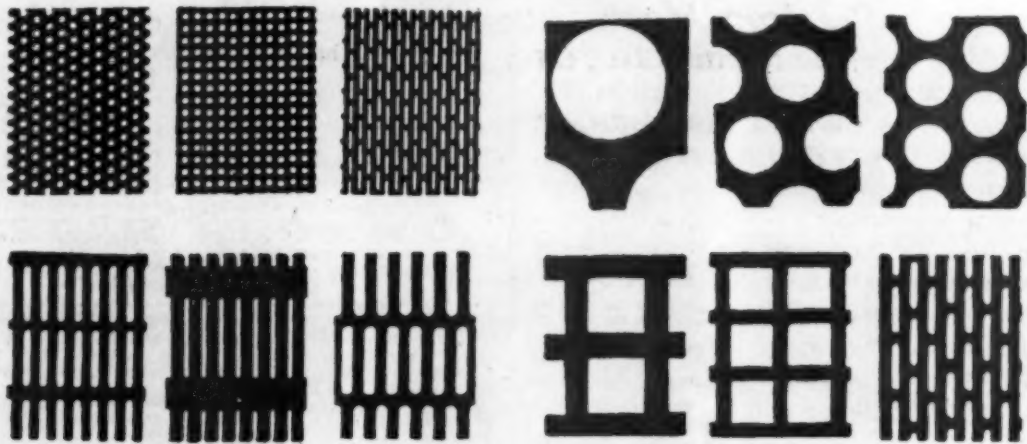
Spot inquiries for the latter two grades are not heavy, consisting for the most part of miscellaneous lots of 500 tons and less. Inquiry for charcoal iron is for one to three car-load lots.

Shipments in August compare favorably with any month this year.

Fourth quarter contracts are being made on the basis of \$21, Chicago furnace.

Southern No. 2 foundry iron still is held firm at \$21. Sales are small. Inquiries are numerous but there is a disposition to wait with fourth quarter purchases.

## PERFORATED METALS



All Sizes and Shapes of Holes in all Kinds and Thicknesses of Metal.  
Punched Metal Grilles, Register Faces, Ventilators, etc.  
Guard Material for Machines and Belts. We supply a complete line of Accessories  
Screens for Grain, Minerals or anything to be screened.  
Perforated Tin and Brass always in stock

## THE HARRINGTON & KING PERFORATING CO.

5649 FILLMORE STREET, CHICAGO, ILLINOIS, U. S. A.

New York Office: 114 Liberty Street

## ARMCO INGOT IRON

The Purest Iron Made

ARCHITECTS and Contractors are well acquainted with this long-lasting sheet metal. Our stock includes every size and gauge required by the trade.

"Since 1866" we have been serving and satisfying customers in all parts of the country.

### Everything in Sheet Metal

Coke and Charcoal	Brass—Copper
Tin Plate	Nickel
Roofing Plate	(in all forms)
Conductor Pipe	"Mond-70"
Gutter	Babbitt
Tinner's Supplies	Solder

## MERCHANT & EVANS CO.

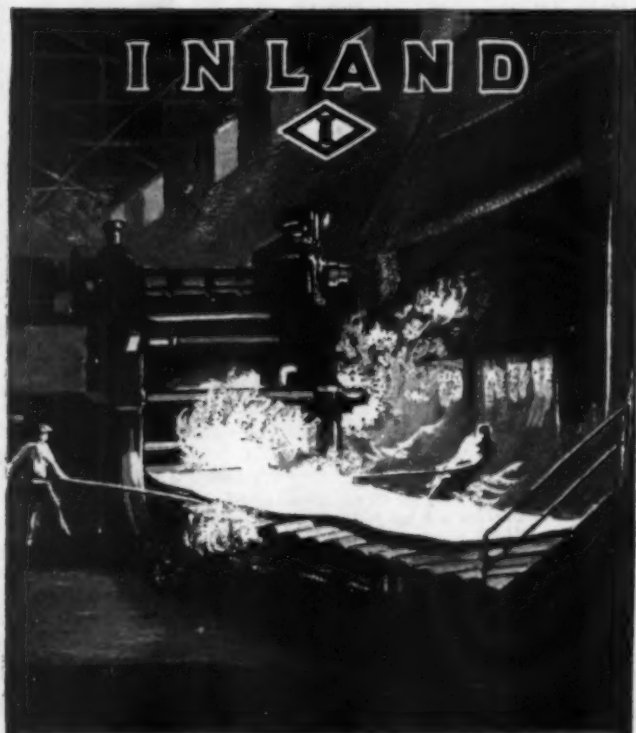
PHILADELPHIA

WAREHOUSES

NEW YORK CLEVELAND  
KANSAS CITY DETROIT  
CHICAGO



## INLAND



At the  
Service  
of Steel  
Users

### INLAND STEEL COMPANY

38 South Dearborn Street, Chicago  
Works: Indiana Harbor, Indiana; Milwaukee, Wisconsin  
Chicago Heights, Illinois  
Branch Offices and Representatives  
ST. PAUL • ST. LOUIS • SALT LAKE CITY • MILWAUKEE  
KANSAS CITY • NEW ORLEANS • EL PASO



# Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

## METALS

### FIG IRON

Chicago Foundry.....	\$21 00
Southern Fdy., No. 2.....	27 01
Lake Superior Charcoal.....	29 04
Malleable.....	21 00

### FIRST QUALITY BRIGHT TIN PLATES

IC 20x28 112 sheets.....	\$25 10
IX 20x28.....	29 60
IXX 20x28 56 sheets.....	16 20
IXXX 20x28.....	17 55
IXXXX 20x28.....	18 95

### TERNE PLATES

IC 20x28, 40-lb. 112 sheets.....	\$27 90
IX 20x28, 40-lb. 112 sheets.....	30 90
IC 20x28, 25-lb. 112 sheets.....	22 20
IX 20x28, 25-lb. 112 sheets.....	25 20
IC 20x28, 20-lb. 112 sheets.....	30 25
IX 20x28, 20-lb. 112 sheets.....	33 00
IC 20x28, 15-lb. 112 sheets.....	16 55

### "ARMCO" INGOT IRON PLATES

No. 8 ga. up to and including	
1/2 in.—100 lbs.....	\$4 55

### COKE PLATES

Cokes, 80 lbs., base, 20x28.....	\$12 60
Cokes, 90 lbs., base, 20x28.....	12 80
Cokes, 100 lbs., base, 20x28.....	13 00
Cokes, 107 lbs., base, 1c	
20x28.....	13 30
Cokes, 135 lbs., base, 1X	
20x28.....	15 70
Cokes, 155 lbs., base, 56	
sheets.....	8 70
Cokes, 175 lbs., base, 56	
sheets.....	9 55
Cokes, 195 lbs., base, 56	
sheets.....	10 40

### BLUE ANNEALED SHEETS

Base 10 ga.....	per 100 lbs. \$2 50
"Armco" 10 ga.....	per 100 lbs. 4 00

### ONE PASS COLD ROLLED BLACK

No. 18-20.....	per 100 lbs. \$2 90
No. 22-24.....	per 100 lbs. 3 95
No. 26.....	per 100 lbs. 4 00
No. 27.....	per 100 lbs. 4 05
No. 28.....	per 100 lbs. 4 10

### GALVANIZED

"Armco" 28.....	per 100 lbs. \$6 70
No. 16.....	per 100 lbs. 4 50
No. 18-20.....	per 100 lbs. 4 65
No. 22-24.....	per 100 lbs. 4 30
No. 26.....	per 100 lbs. 4 95
No. 27.....	per 100 lbs. 5 10
No. 28.....	per 100 lbs. 5 25
No. 30.....	per 100 lbs. 6 75

### BAR SOLDER

Warranted	
60-50.....	per 100 lbs. 41 50

Commercial	
45-55.....	per 100 lbs. 38 50
Plumbers.....	per 100 lbs. 35 50

### ZINC

In Slabs.....	\$3 50
---------------	--------

### SHEET ZINC

Cash Lots (600 lbs.).....	\$13 75
Sheet Lots.....	14 75

### BRASS

Sheets, Chicago base.....	19% c
Tubing, brazed base.....	23% c
Mill base.....	19% c
Wire, base.....	19% c
Rods, base.....	17% c

### COPPER

Sheets, Chicago base.....	23c
Mill base.....	22c
Tubing, seamless base.....	26c
Wire, No. 9 B & S Ga.....	19% c
Wire, No. 10 B & S Ga.....	19% c
Wire, No. 11 B & S Ga.....	19% c
Wire, No. 8 B & S Ga. and	
heavier.....	19% c

## HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

### LEAD

American Pig.....	\$ 9 90
Bar.....	10 90

### Sheet

Pull Coils.....	per 100 lbs. 14 00
Cut Coils.....	per 100 lbs. 14 25

### TIN

Pig tin.....	per 100 lbs. 74 00
Bar tin.....	per 100 lbs. 75 00

### ASBESTOS

Paper up to 1/16.....	6c per lb.
Roll board.....	6 1/2 c per lb.
Mill board 3/32 to 1/2.....	6c per lb.
Corrugated Paper (250	
sq. ft. to roll).....	\$6.00 per roll

### BRUSHES

Hot Air Pipe Cleaning	
Bristle, with handle, each.....	\$0 85
Flue Cleaning	
Steel only, each.....	1 25

### BURRS

Coppers Burrs only.....	45%
-------------------------	-----

### CEMENT, FURNACE

American Seal, 5-lb. cans, net	\$ 45
American Seal, 50-lb. cans, net	90
American Seal, 25-lb. cans, net	5 00
Asbestos, 5-lb. cans, net.....	45
Pecora.....	per 100 lbs. 7 51

### CHIMNEY TOPS

Iwan's Complete Rev. &	
Vent.....	30%
Iwan's Iron Mountain only.....	35%
Standard.....	30 to 40%

### CLINKER TONGS

Front Rank, each.....	\$0 75
Per doz.....	8 40

### CLIPS

Damper	
Acme, with tail pieces,	
per doz.....	\$1 25
Non Rivet tail pieces,	
per doz.....	25

### COPPERS—Soldering

Painted Roofing	
3 lb. and heavier.....	per lb. 40c
2 1/2 lb.....	per lb. 45c
2 lb.....	per lb. 48c
1 1/2 lb.....	per lb. 55c
1 lb.....	per lb. 60c

### CORNICE BRAKES

Chicago Steel Bending	
Nos. 1 to 6B.....	Net

### CUT-OFFS

Kuehn's Korrekkt Kutoffs:	
Galv., plain, round or cor. rd.	
standard gauge.....	40%
26 gauge.....	30%

### DAMPERS

"Yankee" Hot Air	
7 inch, each 26c, doz.....	\$1 75
8 inch, each 26c, doz.....	2 40
9 inch, each 26c, doz.....	2 75
10 inch, each 26c, doz.....	3 00

Smoke Pipe	
7 inch, each.....	\$0 35
8 inch, each.....	40
9 inch, each.....	50
10 inch, each.....	60
12 inch, each.....	90

Reversible Check	
4 inch, each.....	\$1 50
9 inch, each.....	1 70

### DIGGERS

Post Hole	
Iwan's Split Handle	
(Eureka)	
4-ft. Handle.....	per doz. \$14 00
7-ft. Handle.....	per doz. 35 00
Iwan's Hercules pattern,	
per doz.....	14 90

### EAVES TROUGH

Galv. Crimpedge, crated.....	75 & 5%
------------------------------	---------

### ELBOWS

Conductor Pipe Milcor.	
Galv., plain or corrugated,	
round flat Crimp.....	
Std. Gauge.....	65%
28 Gauge.....	60%
26 Gauge.....	40%
24 Gauge.....	10%

### Square Corrugated

Standard Gauge.....	50%
No. 28 Gauge.....	45%
26 Gauge.....	30%

### Portico Elbows

Standard Gauge Conductor Pipe,	
plain or corrugated.....	
Not nested.....	70 & 5%
nested solid.....	70 & 5%

### ELBOWS—Steve Pipe

1-piece Corrugated, Uniform Blue	
"Milcor" No. 28 gauge.....	
Doz.....	\$1 15
5-inch.....	1 25
6-inch.....	1 25
7-inch.....	1 75

### Special Corrugated

3-inch.....	\$1 00
7-inch.....	1 60

### Adjustable—Uniform Blue

"Milcor" No. 28 Gauge, Uniform	
Blue.....	
5-inch.....	\$1 65
6-inch.....	1 75
7-inch.....	2 40

### WOOD FACES—50% off list.

726-6-12 1/4 (100 rods).....	\$28 63
1948-6-14 1/4 (100 rods).....	43 63

### FENCE

726-6-12 1/4 (100 rods).....	\$28 63
1948-6-14 1/4 (100 rods).....	43 63

### FILES AND RASPS

Heller's (American).....	50-10%
American.....	60-10%
Arcade.....	50%
Black Diamond.....	40-10-5%
Eagle.....	50%
Great Western.....	50%
Kearney & Foot.....	50%
McClellan.....	50%
Nicholson.....	50%
Simonds.....	60%

### FIRE POTS

Otto Bernz Co.	
East of west boundary line of	
Province of Manitoba, Canada.	
No. Dakota, So. Dakota, Nebraska,	
Kansas, Oklahoma, Amarillo,	
San Angelo and Laredo,	
Texas.....	65%
West of above boundary line	
.....	45%

### Clayton & Lambert's

East of west boundary line of	
Province of Manitoba, Canada.	
No. Dakota, So. Dakota, Nebraska,	
Kansas, Oklahoma, Amarillo,	
San Angelo and Laredo,	
Texas.....	62%
West of above boundary line	
.....	45%

Geo. W. Diener Mfg. Co.	Ea.
No. 02 Gasolene Torch, 1	
qt.....	\$ 5 55
No. 0250, Kerosene, or	
Gasolene Torch, 1 qt.....	7 50
No. 10 Tinner's Furn.	
Square tank, 1 gal.....	12 00
No. 15 Tinner's Furn.	
Round tank, 1 gal.....	12 00
No. 21 Gas Soldering Fur-	
nace.....	3 00
No. 110 Automatic Gas	
Soldering Furnace.....	10 50

### Double Blast Mfg. Co.

Gasolene, Nos. 25 and 35.....	60%
-------------------------------	-----

### Quick Meal Stove Co.

Vesuvius, F. O. B. St. Louis	30%
(Extra Disc. for large	
quantities)	

### Chas. A. Hones, Inc.

Buzzer No. 1.....	\$ 9 00
Buzzer No. 2.....	12 00
Buzzer No. 22.....	13 50
Buzzer No. 43.....	15 00
Buzzer No. 43.....	19 00

### GALVANIZED WARE

Falls (Galv. after made),	
10-qt.....	\$2 12
Tubs (Galv. after made),	
No. 1.....	6 00
No. 2.....	6 55

### GLASS

Single Strength, A, 25-in.	
brackets.....	85%
Single Strength, A, 34 to 40-	
in. bracket.....	82%
Single Strength A, all other	
brackets.....	81%
Double Strength A, all sizes.....	82%

### HANGERS

Conductor Pipe	
Milcor Perfection Wire.....	25%
Eaves Trough	
Milcor Eclipse Wire.....	15%
Milcor Triplex Wire.....	10%
Milcor Milwaukee Extension	10%
Milcor Steel (galv. after	
forming) List plus.....	12 1/2%
Milcor Selflock E. T. Wire,	
List plus.....	50%

### HOOKS

Box	
V. & B. No. 1, each.....	\$0 25
Conductor	
Milcor	
"Direct Drive" Wrought	
Iron for wood or brick.....	15%

Hay	
V. & B. No. 1, each.....	\$0 25

### HUMIDIFIERS

"Front-Rank," Automatic	
In single lots.....	50%
In lots of 10 or more.....	50-5%
In lots of 25 or more.....	50-10%
Vapor pans, etc., each.....	50%

### LIFTERS

Stove Cover	
Coppered.....	per gro. \$5 00
Alaska.....	per gro. 4 75

### MAILLETS

Tinner's	
Hickory.....	per doz. \$2 25

### MITRES

Galvanized steel mitres, and	
caps, end pieces, outlets.....	30%

Milcor	
Galv. one piece stamped.....	40%

### NAILS

Cut Steel.....	\$4 35
Cut Iron.....	4 35

Wire	
Common.....	3 05
Cement Coated.....	3 05
(Continued on page 36).	



This is as fine an ear as can be made. Perfect, fine finish and nicely tinned. Write today for samples.



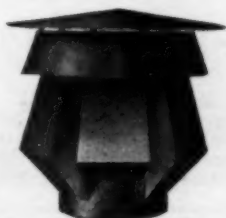
## BERGER'S WROUGHT STAR EARS

Furnished in gross boxes or in bulk to suit the purchaser

We can furnish sizes 20, 30 & 40 stamped from sheet brass.

No. 40

Write today for our catalog which illustrates our complete line of ears  
**BERGER BROS. CO.**  
229 to 237 ARCH STREET  
WAREHOUSES AND FACTORY: 100 to 114 BREAD STREET  
PHILADELPHIA, PA.



The 12-Cylinder Ventilator  
Used in Every State  
in the Union.

**SPECIFY ÆOLUS  
VENTILATORS**

## ÆOLUS FOR HOMES

The home should be properly ventilated—few of them are. Here is a sales opportunity often overlooked by the average Sheet Metal Worker, but one which offers a lucrative business to those who take advantage of it.

**Æolus-Dickinson Co.**

Vent Makers Since 1888

3333-32 South Arctesian Avenue  
CHICAGO

Phone: Lafayette 1862-1863

## Memorial Monuments

Write for Prices and  
Illustrations

**Gerock Bros. Mfg. Co.**  
Sheet Metal Ornaments  
and  
**STATUARY**

1252 So. Vandeventer Ave.  
St. Louis, Mo., U. S. A.

## CHICAGO STEEL SLITTING SHEAR

**LIGHT—POWERFUL  
DURABLE**

Capacity 10 gauge sheets  
Any Length or Width  
Flat Bars 3/16x2"  
Weight 22 pounds

Price \$12.50 Net  
F. O. B. Chicago



Made of pressed steel and equipped with hold-down. Blades of highest grade crucible steel. Most indispensable high grade shears made. Equal to other shears selling at over twice the price. **ORDER YOURS TODAY.**

**DREIS & KRUMP MFG. CO., 7404 Loomis St., Chicago**

## EVERYTHING USED IN SHEET METAL WORK

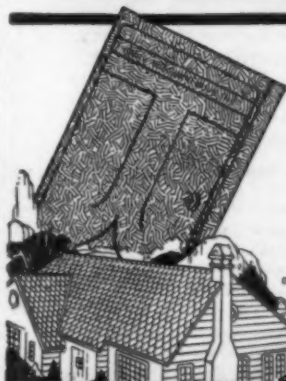
### A Complete Stock Insures Prompt Shipment

In our warehouse you will find one of the most complete stocks in the country. Not only complete as to quantity but selected by men who have had many years of experience.

There are 12 men in our employ who have been with us a total of 261 years—an average of 22 years per man. It is the knowledge resulting from this experience that we offer you in Osborn Service.

**The J. M. & L. A. OSBORN CO.**  
CLEVELAND

Buffalo Warehouse, 64-68 Rapin Street



The difference between the two kinds of Galvanized Shingles is this:

**H**AND Dipped Galvanized Shingles are made from prime tin plate and immersed in molten zinc—all edges, as well as both sides are coated.

The other kind are made from sheets which come already galvanized. We make both kinds.

**CORTRIGHT METAL ROOFING CO.**  
50 N. 23rd Street, Philadelphia  
528 S. Clark Street, Chicago

## CORTRIGHT METAL SHINGLES

### The NEW IMPROVED STANDARD Rotable Ventilator



The New Standard

This favorite cone-shaped ventilator is now improved in several important points.

The weight of the ventilator body is now carried on a concave thrust bearing nested in the apex of the conical body. This bearing turns upon the pivot point of the stationary center spindle.

The bronze Guide Bushings are now made of non-corrosive bronze which minimizes friction and any tendency to screech when body is rotating.

There are other new features. Write today for new catalog and pricelist.

**STANDARD VENTILATOR CO., LEWISBURG, PA**

NETTING, POULTRY		ROOFING	
Galvanized before weaving.....	57½-5%	Best grade, slate surf. prep'd	\$2 30
Galvanized after weaving.....	52½-5%	Best talc surfaced.....	2 65
		Medium talc surfaced.....	2 00
		Light talc surfaced.....	1 20
		Red Rosin Sheeting, per ten	57 00
PASTE		SCREWS	
Asbestos Dry Paste:		Sheet Metal	
200-lb. barrel.....	\$15 00	No. 7, ½x½, per gross.....	\$9 52
100-lb. barrel.....	8 00	No. 10, ¾x½, per gross.....	63
35-lb. pail.....	3 25	No. 14, ¾x½, per gross.....	39
10-lb. bag.....	1 00		
5-lb. bag.....	55		
2½-lb. cartons.....	30		
PIPE		SHEARS, TINNERS' & MACHINISTS'	
Conductor		Viking.....	\$22 00
Cor. Rd., Plain Rd. or Sq.		Lennox Throatless	
"Interlock" Galvanized		No. 18.....	35%
Crated and nested (all gauges).....	75-2½%	Shear blades.....	10%
Crated and not nested (all gauges).....	70-15%	(f. o. b. Marshalltown, Iowa.)	
"Milcor" "Titlelock" Uniform			
Blue Stove		SHOES	
28 gauge, 5 inch U. C. nested.....	11 00	Milcor	
28 gauge, 6 inch U. C. nested.....	12 00	Galv. Std. Gauge, Plain or corr. round flat crimp.....	65%
28 gauge, 7 inch U. C. nested.....	14 00	28 gauge round flat crimp.....	40%
30 gauge, 5 inch U. C. nested.....	10 00	24 gauge round flat crimp.....	10%
30 gauge, 6 inch U. C. nested.....	10 50	Conductor.....	65%
30 gauge, 7 inch U. C. nested.....	13 00		
T-Joint Made up		SNIPS, TINNERS'	
6-inch, 28 ga.....per 100	32 50	Clover Leaf.....	40 & 10%
		National.....	40 & 10%
		Star.....	50%
		Milcor.....	Net
Furnace Pipe		SQUARES	
Double Wall Pipe and Pipe Fittings.....	40-10%	Steel and Iron.....	Net
Single Wall Pipe, Round Iron Pipe Galvanized.....	40-10%	(Add for bluing, \$3 per doz. net.)	
Galvanized and Black Fittings.....	40-10%	Mitre.....	Net
Milcor Galvanized Pipe and Fittings.....	40-10%	Try.....	Net
Lead		Try and Bevel.....	Net
Per 100 lbs.....	\$12 50	Try and Mitre.....	Net
		Fox's.....per doz.	\$6 00
		Winterbottom's.....	10%
		STOPPERS, FLUE	
POKERS, STOVE		Common.....per doz.	\$1 10
Wr't Steel, str't or bent.....per doz.	\$0 75	Gern, No. 1.....per doz.	1 10
Nickel Plated, coil handles.....per doz.	1 10	Gern, flat, No. 3.....per doz.	1 00
		VENTILATORS	
POKERS, FURNACE		Standard.....	30 to 40%
Each.....	\$0 50	WIRE	
		Plain annealed wire, No. 8 per 100 lbs.....	\$3 00
PULLEYS		Galvanized barb wire, per 100 lbs.....	3 90
Furnace Tackle.....per doz.	\$0 60	Wire cloth—Black painted, 12-mesh, per 100 sq. ft.....	1 75
per gross.....	6 00	Cattle Wire—galvanized catch weight spool, per 100 lbs.....	3 85
Furnace Screw (encased).....per doz.	75	Galvanized Hog Wire, 30" rod spool, per spool.....	3 34
		Galvanized plain wire, No. 9, per 100 lbs.....	3 50
Ventilating Register		Stove Pipe, per stone.....	1 10
Per gross.....	9 00		
Small, per pair.....	30		
Large, per pair.....	50		
		WRINGERS	
PUTTY		No. 750, Guarantee.....per doz.	\$55 00
Commercial Putty, 100-lb. kits.....	\$3 40	No. 770, Bicycle.....per doz.	52 50
		No. 670, Domestic.....per doz.	48 50
		No. 110, Brighton.....per doz.	48 50
QUADRANTS		No. 750, Guarantee.....per doz.	55 50
Malleable Iron Damper.....	10%	No. 740, Bicycle.....per doz.	52 50
		No. 22, Pioneer.....per doz.	79 00
REDUCERS—Oval Stove Pipe		No. 2, Superb.....per doz.	39 00
Per doz.....	\$2 00		
7—6, 1 doz. in carton.....	\$2 00		
BASEBOARD REGISTERS			
Excelsior.....	50%		
FLOOR REGISTERS AND BORDERS			
Cast Iron.....	20%		
Steel and Semi-Steel.....	40%		
In lots less than 50.....	33½%		
Baseboard.....	40%		
In lots less than 50.....	33½%		
Adjustable Ceiling Ventilators.....	40%		
Register Faces—Cast and Steel			
Japaned, Bronzed and Plated, 4x8 to 14x14.....	40%		
In lots less than 50.....	33½%		
Large Register Faces—Cast, 14x14 to 38x42.....	50%		
Large Register Faces—Steel, 14x14 to 38x42.....	65%		
In lots less than 50.....	60%		
RIDGE ROLL			
Milcor			
Galv., Plain Ridge Roll, b'd'd.....	75-10-5%		
Galv., Plain Ridge Roll, crated.....	75-10%		
Globe Finials for Ridge Roll.....	50%		



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CEILINGS  
and  
SIDEWALLS**

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*With quickly removable soldering iron  
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*Div. American Stove Company*

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Tinner's  
Furnaces**

are only made by Diener. No others are genuine. "Torrids" cost no more than others and the user gets greater satisfaction.

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*Makers of fine Blow Torches and  
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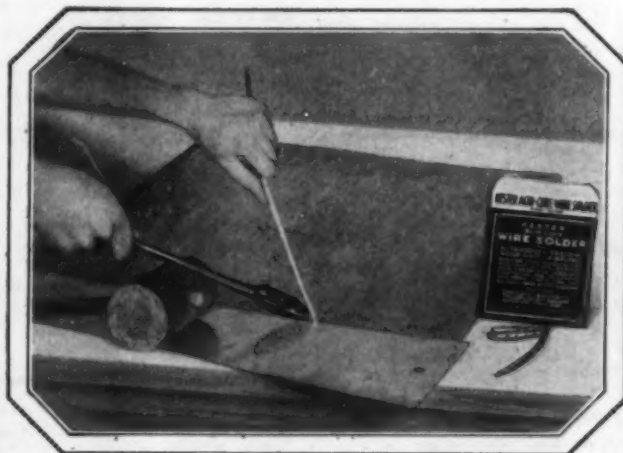
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*(Underwriters' Laboratories Inspected)*

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By using Kester Solder, you know your job will last. Inside of this hollow wire solder are tiny pockets full of scientifically prepared flux. This flows to the job just before the solder melts, and you guide it right where you want it.

This eliminates the old acid pot and saves one-third of the time together with labor and material. Kester figures a neat saving for the steady user.



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CHICAGO, U. S. A.



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**Asbestos Paper.**  
Sall Mountain Co., Chicago, Ill.

**Asbestos Products.**  
Sall Mountain Co., Chicago, Ill.

**Bale Ties.**  
American Steel & Wire Co., Chicago, Ill.

**Blowers.**  
Sturtevant Co., B. F., Boston, Mass.

**Bolts—Stove.**  
The Kirk-Latty Co., Cleveland, Ohio

**Brakes—Bending.**  
Dreis & Krump Mfg. Co., Chicago, Ill.

**Brakes—Cornice**  
Dreis & Krump Mfg. Co., Chicago, Ill.

**Brass and Copper**  
Copper & Brass Research Association, New York  
Hussey & Co., C. G., Pittsburgh, Pa.  
Merchant & Evans Co., Philadelphia, Pa.

**Cans—Garbage**  
Osborn Co., The J. M. & L. A., Cleveland, Ohio

**Castings—Malleable.**  
Fanner Mfg. Co., Cleveland, Ohio

**Ceilings—Metal.**  
Friedley-Voshardt Co., Chicago, Ill.  
Milwaukee Corrugating Co., Milwaukee, Wis.  
Wheeling Corrugating Co., Wheeling, W. Va.

**Chaplets.**  
Fanner Mfg. Co., Cleveland, Ohio

**Chain—Sash.**  
Parker-Kalon Corp., New York, N. Y.

**Chimney Tops.**  
Standard Ventilator Co., Lewisburg, Pa.

**Cleaners—Furnace.**  
Sturtevant, Boston, Mass.

**Cleaners—Suction.**  
Sturtevant, Boston, Mass.

**Copper.**  
Copper & Brass Research Association, New York  
Hussey & Co., C. G., Pittsburgh, Pa.

**Cornices.**  
Friedley-Voshardt Co., Chicago, Ill.  
Milwaukee Corrugating Co., Milwaukee, Wis.

**Cut-Offs—Rain Water.**  
Milwaukee Corrugating Co., Milwaukee, Wis.

**Dampers**  
S. M. Howes Co., Charlestown, Mass.

**Damper Clips**  
S. M. Howes Co., Charlestown, Mass.

**Diffuser—Air Duct.**  
Aeolus-Dickinson Co., Chicago, Ill.

**Doors—Metal.**  
David Lupton's Sons Co., Philadelphia, Pa.

**Eave Trough.**  
Berger Bros. Co., Philadelphia, Pa.

**Hardware Co.,**  
Philadelphia, Pa.

**Lupton's Sons Co.,**  
Philadelphia, Pa.

**Milwaukee Corrugating Co.,**  
Milwaukee, Wis.

**New Jersey Zinc Sales Co.,**  
New York, N. Y.

**Wheeling Corrugating Co.,**  
Wheeling, W. Va.

**Elbows and Shoes—Conductor.**  
American Rolling Mill Co., Middletown, Ohio  
Dieckmann Co., Ferdinand, Cincinnati, Ohio

**Double-Duty Elbow Co.,**  
Aurora, Ill.  
Lupton's Sons Co., David, Philadelphia, Pa.  
Milwaukee Corrugating Co., Milwaukee, Wis.

**Enamel Wire.**  
Lalanc & Grosjean Mfg. Co., Chicago, Ill.

**Wood Faces—Cold Air.**  
American Wood Register Co., Plymouth, Ind.  
Eaglesfield Ventilator Co., Indianapolis, Ind.  
Milwaukee Corrugating Co., Milwaukee, Wis.

**Fences.**  
American Steel & Wire Co., Chicago, Ill.

**Flue Thimbles.**  
Milwaukee Corrugating Co., Milwaukee, Wis.

**Furnace Cement—Asbestos.**  
Connors Paint Mfg. Co., Wm., Troy, N. Y.  
Milwaukee Corrugating Co., Milwaukee, Wis.  
Pecora Paint Co., Philadelphia, Pa.  
Sall Mountain Co., Chicago, Ill.

**Furnace Cleaners.**  
Sturtevant Co., B. F., Boston, Mass.

**Furnace Fans.**  
Sturtevant Co., B. F., Boston, Mass.  
Warm Air Furnace Fan Co., The, Cleveland, Ohio

**Furnace Rings.**  
Milwaukee Corrugating Co., Milwaukee, Wis.  
Walworth Run Fdy. Co., Cleveland, Ohio

**Furnace—Warm Air.**  
American Furnace Co., St. Louis, Mo.  
American Foundry & Furnace Co., Bloomington, Ill.  
Andes Range & Furnace Corp., Geneva, N. Y.

**Brillion Iron Works,**  
Brillion, Wis.

**Chicago Furnace Supply Co.,**  
Chicago, Ill.

**Excelsior Steel Furnace Co.,**  
Chicago, Ill.

**Forest City Fdy. & Mfg. Co.,**  
Cleveland, Ohio

**Gray & Dudley Co.,**  
Nashville, Tenn.

**Hall-Neal Furnace Co.,**  
Indianapolis, Ind.

**Henry Furnace & Fdy. Co.,**  
Cleveland, Ohio

**Hess-Snyder Co.,**  
Massillon, Ohio

**Homer Furnace Co.,**  
Coldwater, Mich.

**International Heater Co.,**  
Utica, N. Y.

**Kruse Co.,**  
Indianapolis, Ind.

**Lamneck Co.,**  
W. E., Columbus, Ohio

**Langenberg Mfg. Co.,**  
St. Louis, Mo.

**Lennox Furnace Co.,**  
Marshalltown, Ia.; Syracuse, N. Y.

**Liberty Foundry Co.,**  
St. Louis, Mo.

**Marshalltown Heater Co.,**  
Marshalltown, Iowa

**May-Fieberger Furnace Co.,**  
Newark, Ohio

**Meyer Furnace Co.,**  
The Peoria, Ill.

**Monitor Furnace Co.,**  
Cincinnati, Ohio

**Mt. Vernon Furnace & Mfg. Co.,**  
Mt. Vernon, Ill.

**Standard Furnace & Supply Co.,**  
Omaha, Neb.

**St. Clair Foundry Corporation,**  
Centralia, Ill.

**St. Louis Heating Co.,**  
St. Louis, Mo.

**Success Heater Mfg. Co.,**  
Des Moines, Iowa

**Thatcher Co.,**  
Chicago, Ill.

**Utica Heater Co.,**  
Utica, N. Y.

**Waterman-Waterbury Co.,**  
Minneapolis, Minn.

**Western Steel Products Co.,**  
Duluth, Minn.

**Wise Furnace Co.,**  
Akron, Ohio

**Williamson Heater Co.,**  
Cincinnati, Ohio

**Garages—Metal.**  
Milwaukee Corrugating Co., Milwaukee, Wis.

**Glass—Wire.**  
David Lupton's Sons Co., Philadelphia, Pa.

**Grilles.**  
Diamond Mfg. Co., Wyoming, Pa.  
Hart & Cooley Co., New Britain, Conn.

**Independent Register & Mfg. Co.,**  
Cleveland, Ohio

**Tuttle & Bailey Mfg. Co.,**  
Chicago, Ill.

**Handles—Boiler.**  
Berger Bros. Co., Philadelphia, Pa.

**Hangers—Eaves Trough.**  
Berger Co., L. D., Philadelphia, Pa.

**Milwaukee Corrugating Co.,**  
Milwaukee, Wis.

**Heaters—Cabinet.**  
Gray & Dudley Co., Nashville, Tenn.

**Mueller Furnace Co.,**  
L. J., Milwaukee, Wis.

**Peninsular Stove Co.,**  
Detroit, Mich.

**Waterman-Waterbury Co.,**  
Minneapolis, Minn.

**Heaters—School Room.**  
Floral City Heater Co., Monroe, Mich.

**Meyer Furnace Co.,**  
The Peoria, Ill.

**Standard Furnace & Supply Co.,**  
Omaha, Neb.

**Waterman-Waterbury Co.,**  
Minneapolis, Minn.

**Hooks—Conductor.**  
Berger Co., L. D., Philadelphia, Pa.

**Hotels**  
Fort Shelby Hotel, Detroit, Mich.

**Humidifiers.**  
Robinson Furnace Co., Chicago, Ill.

**Jobbers—Hardware.**  
Clark-Smith Hardware Co., Peoria, Ill.

**Kitchen Utensils.**  
Lalanc & Grosjean Mfg. Co., Chicago, Ill.

**Lath—Expanded Metal.**  
Milwaukee Corrugating Co., Milwaukee, Wis.

**Machines—Crimping.**  
Bertsch & Co., Cambridge City, Ind.

**Machinery—Culvert.**  
Bertsch & Co., Cambridge City, Ind.

**Machines—Tinsmiths.**  
Bertsch & Co., Cambridge City, Ind.

**Chicago Elbow Machine Co.,**  
Oak Park, Ill.

**Dreis & Krump Mfg. Co.,**  
Chicago, Ill.

**Great Lakes Supply Co.,**  
South Chicago, Ill.

**Marshalltown Mfg. Co.,**  
Marshalltown, Iowa

**Osborn Co., The J. M. & L. A.,**  
Cleveland, Ohio

**Peck, Stow & Wilcox Co.,**  
Southington, Conn.

**Unishear Co., The, New York, N. Y.**  
Whitney Mfg. Co., W. A., Rockford, Ill.

**Whitney Metal Tool Co.,**  
Rockford, Ill.

**Metals—Perforated.**  
Diamond Mfg. Co., Wyoming, Pa.

**Harrington & King Perforating Co.,**  
Chicago, Ill.

**Miters.**  
Friedley-Voshardt Co., Chicago, Ill.

**Milwaukee Corrugating Co.,**  
Milwaukee, Wis.

**Miters—Eaves Trough.**  
David Lupton's Sons Co., Philadelphia, Pa.

**Milwaukee Corrugating Co.,**  
Milwaukee, Wis.

**Nails—Slatting.**  
Hussey & Co., C. G., Pittsburgh, Pa.

**Nails—Wire.**  
American Steel & Wire Co., Chicago, Ill.

**Oil Burners.**  
Security Stove & Mfg. Co., Kansas City, Mo.

**Quaker Mfg. Co.,**  
Chicago, Ill.

**Ornaments—Sheet Metal.**  
Friedley-Voshardt Co., Chicago, Ill.

**Geroch Bros. Mfg. Co.,**  
St. Louis, Mo.

**Milwaukee Corrugating Co.,**  
Milwaukee, Wis.

**Paint.**  
Connors Paint Mfg. Co., Wm., Troy, N. Y.

**Pecora Paint Co.,**  
Philadelphia, Pa.

**Patterns—Furnace & Stove.**  
Cleveland Castings Pattern Co., Cleveland, Ohio

**Quincy Pattern Co.,**  
Quincy, Ill.

**Vedder Pattern Works,**  
Troy, N. Y.

**Pipe and Fittings—Furnace.**  
Chicago Furnace Supply Co., Chicago, Ill.

**Excelsior Steel Furnace Co.,**  
Chicago, Ill.

**Heary Furnace & Fdy. Co.,**  
Cleveland, Ohio

**Lamneck Co.,**  
W. E., Columbus, Ohio

**Meyer & Bro. Co.,**  
F. Peoria, Ill.

**Milwaukee Corrugating Co.,**  
Milwaukee, Wis.

**Mueller Furnace Co.,**  
L. J., Milwaukee, Wis.

**Osborn Co., The J. M. & L. A.,**  
Cleveland, Ohio

**Robinson Furnace Co.,**  
Chicago, Ill.

**Standard Furnace & Supply Co.,**  
Omaha, Neb.

**Pipe and Fittings—Stove.**  
Excelsior Steel Furnace Co., Chicago, Ill.

**Meyer & Bro. Co.,**  
F. Peoria, Ill.

**Milwaukee Corrugating Co.,**  
Milwaukee, Wis.

**New Jersey Zinc Sales Co.,**  
The New York, N. Y.

**Wheeling Corrugating Co.,**  
Wheeling, W. Va.



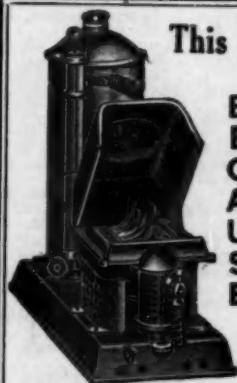
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**E**A 3½ pound copper will heat and melt solder in **TWO MINUTES**.  
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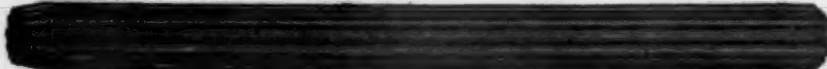
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Write for quantity discount.



Inexpensive!

Mention **AMERICAN ARTISAN** in your reply—Thank you!



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Parker-Kalon Corp.,  
New York, N. Y.  
Peck, Stow & Wilcox Co.,  
Southington, Conn.  
Whitney Mfg. Co., W. A.,  
Rockford, Ill.  
Whitney Metal Tool Co.,  
Rockford, Ill.

**Punches—Combination Bench and Hand.**  
Parker-Kalon Corp.,  
New York, N. Y.  
Whitney Metal Tool Co.,  
Rockford, Ill.  
Whitney Mfg. Co., W. A.,  
Rockford, Ill.

**Punches—Hand.**  
Whitney Metal Tool Co.,  
Rockford, Ill.  
Whitney Mfg. Co., W. A.,  
Rockford, Ill.

**Patty—Stove.**  
Connors Paint Mfg. Co., Wm.,  
Troy, N. Y.  
Pecora Paint Co.,  
Philadelphia, Pa.

**Quadrants—Damper.**  
Parker-Kalon Corp.,  
New York, N. Y.

**Ranges—Combination Gas & Coal.**  
Quick Meal Stove Co.,  
St. Louis, Mo.  
Thatcher Co.,  
Newark, N. J.

**Ranges—Gas.**  
Quick Meal Stove Co.,  
St. Louis, Mo.  
Gray & Dudley Co.,  
Nashville, Tenn.

**Registers—Warm Air.**  
American Wood Register Co.,  
Plymouth, Ind.  
Chicago Furnace Supply Co.,  
Chicago, Ill.  
Eaglesfield Ventilator Co.,  
Indianapolis, Ind.  
Excelsior Steel Furnace Co.,  
Chicago, Ill.  
Hart & Cooley Co.,  
New Britain, Conn.  
Henry Furnace & Fdy. Co.,  
Cleveland, Ohio  
Independent Register & Mfg. Co.,  
Cleveland, Ohio  
Lamneck & Co., W. E.,  
Columbus, Ohio  
Meyer & Bro. Co., F., Peoria, Ill.  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.  
Mueller Furnace Co., L. J.,  
Milwaukee, Wis.  
Peoria Wood Register Co.,  
Peoria, Ill.  
Robinson Furnace Co.,  
Chicago, Ill.  
Rock Island Register Co.,  
Rock Island, Ill.  
Standard Furnace & Supply Co.,  
Omaha, Neb.  
Stearns Register Co.,  
Detroit, Mich.  
Tuttle & Bailey Mfg. Co.,  
Chicago, Ill.  
Walworth Run Fdy. Co.,  
Cleveland, Ohio

**Registers—Wood.**  
American Wood Register Co.,  
Plymouth, Ind.  
Chicago Furnace Supply Co.,  
Chicago, Ill.  
Eaglesfield Ventilator Co.,  
Indianapolis, Ind.  
Peoria Wood Register Co.,  
Peoria, Ill.

**Repairs—Stove and Furnace.**  
Hessler Co., H. E.,  
Syracuse, N. Y.  
Northwestern Stove Repair Co.,  
Chicago, Ill.

**Ridging.**  
American Rolling Mill Co.,  
Middletown, Ohio  
David Lupton's Sons Co.,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.

**Rivets—Stove.**  
The Kirk-Latty Co.,  
Cleveland, Ohio

**Roasters.**  
Lalanc & Grosjean Mfg. Co.,  
Chicago, Ill.

**Rods—Stove.**  
The Kirk-Latty Co.,  
Cleveland, Ohio

**Rolls—Forming.**  
Bertsch & Co.,  
Cambridge City, Ind.

**Roofing Cement.**  
Connors Paint Mfg. Co., Wm.,  
Troy, N. Y.  
Pecora Paint Co.,  
Philadelphia, Pa.

**Roof—Flashing.**  
Hessler Co., H. E., Syracuse, N. Y.  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.

**Roofing—Iron and Steel.**  
American Roofing Mill Co.,  
Middletown, Ohio  
Cortright Metal Roofing Co.,  
Philadelphia, Pa.  
Friedley-Voshardt Co.,  
Chicago, Ill.  
Granite City Steel Works,  
Granite City, Ill.  
Inland Steel Co.,  
Chicago, Ill.  
Merchant & Evans Co.,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.  
National Enameling and Stamping Co.,  
Granite City, Ill.  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Roofing—Tin.**  
Taylor Co., N. & G.,  
Philadelphia, Pa.  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Roofing—Zinc.**  
New Jersey Zinc Sales Co., The,  
New York, N. Y.

**Rubbish Burners.**  
Hart & Cooley Co.,  
New Britain, Conn.

**Salt—Ammoniac.**  
Special Chemicals Co.,  
Waukegan, Ill.

**Schools—Sheet Metal Pattern Drafting.**  
St. Louis Technical Institute,  
St. Louis, Mo.

**Screws—Sheet Metal.**  
Parker-Kalon Corp.,  
New York, N. Y.

**Screens—Perforated Metal.**  
Harrington & King Perforating Co.,  
Chicago

**Shears—Hand and Power.**  
Double-Duty Elbow Co.,  
Aurora, Ill.  
Marshalltown Mfg. Co.,  
Marshalltown, Iowa  
Peck, Stow & Wilcox Co.,  
Southington, Conn.  
Unishear Co., The,  
New York  
Viking Shear Co.,  
Erie, Pa.

**Sheets—Black and Galvanized.**  
American Rolling Mill Co.,  
Middletown, Ohio  
Davis Co., Inc., C. S., Chicago, Ill.  
Granite City Steel Works,  
Granite City, Ill.  
Inland Steel Co.,  
Chicago, Ill.  
Merchant & Evans Co.,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.  
National Enameling and Stamping Co.,  
Granite City, Ill.  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio  
Taylor Co., N. & G.,  
Philadelphia, Pa.  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Sheets—Iron.**  
American Rolling Mill Co.,  
Middletown, Ohio  
Merchant & Evans Co.,  
Philadelphia, Pa.

**Sheets—Tin.**  
Davis Co., Inc., C. S., Chicago, Ill.  
Granite City Steel Works,  
Granite City, Ill.  
Merchant & Evans Co.,  
Philadelphia, Pa.  
National Enameling and Stamping Co.,  
Granite City, Ill.  
Taylor Co., N. & G.,  
Philadelphia, Pa.

**Sheets—Zinc.**  
New Jersey Zinc Sales Co., The,  
New York, N. Y.

**Shingles and Tiles—Metal.**  
Cortright Metal Roofing Co.,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.  
Wheeling Corrugating Co.,  
Wheeling, W. Va.

**Shingles—Asphalt.**  
Sall Mountain Co.,  
Chicago, Ill.

**Shingles—Zinc.**  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.

**Sifters—Ash.**  
Diener Mfg. Co., G. W.,  
Chicago, Ill.

**Sky Lights.**  
David Lupton's Sons Co.,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.

**Snips.**  
Peck, Stow & Wilcox Co.,  
Southington, Conn.

**Solder.**  
Chicago Solder Co.,  
Chicago, Ill.  
Double-Duty Elbow Co.,  
Aurora, Ill.  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.

**Solder—Aluminum.**  
Ziener Aluminum Solder Co.,  
Rockford, Ill.

**Soldering Furnaces.**  
Bernz Co., Otto,  
Newark, N. J.  
Burgess Soldering Furnace Co.,  
Columbus, Ohio  
Clayton & Lambert Mfg. Co.,  
Detroit, Mich.  
Diener Mfg. Co., G. W.,  
Chicago, Ill.  
Double Blast Mfg. Co.,  
North Chicago, Ill.  
Quick Meal Stove Co.,  
St. Louis, Mo.

**Soldering Supplies.**  
Double-Duty Elbow Co., Aurora, Ill.  
Special Chemicals Co.,  
Waukegan, Ill.

**Specialties—Hardware.**  
Diener Mfg. Co., G. W.,  
Chicago, Ill.  
Hessler Co., H. E., Syracuse, N. Y.

**Stairs—Hard Iron Cleaning.**  
Fanner Mfg. Co.,  
Cleveland, Ohio

**Statuary.**  
Friedley-Voshardt Co.,  
Chicago, Ill.  
Gerock Bros. Mfg. Co.,  
St. Louis, Mo.

**Steel Stampings.**  
American Tube & Stamping Co.,  
Bridgeport, Conn.

**Stove Pipe Reducers.**  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.

**Stoves—Camp.**  
Quick Meal Stove Co.,  
St. Louis, Mo.

**Stoves—Gasoline and Oil.**  
Quick Meal Stove Co.,  
St. Louis, Mo.

**Stoves and Ranges.**  
Andes Range & Furnace Corp.,  
Geneva, N. Y.

**Stoves—Gasoline and Oil.**  
Andes Range & Furnace Corp.,  
Geneva, N. Y.

**Stoves—Gasoline and Oil.**  
Andes Range & Furnace Corp.,  
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**Stoves—Gasoline and Oil.**  
Andes Range & Furnace Corp.,  
Geneva, N. Y.

**Stoves—Gasoline and Oil.**  
Andes Range & Furnace Corp.,  
Geneva, N. Y.

**Tinplate.**  
Davis Co., Inc., C. S., Chicago, Ill.  
Granite City Steel Works,  
Granite City, Ill.  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.  
National Enameling and Stamping Co.,  
Granite City, Ill.  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio  
Taylor Co., N. & G.,  
Philadelphia, Pa.

**Tin—Perforated.**  
Harrington & King Perforating Co.,  
Chicago, Ill.

**Tools—TinSmith's.**  
Bertsch & Co.,  
Cambridge City, Ind.  
Chicago Elbow Machine Co.,  
Oak Park, Ill.  
Dreis & Krump Mfg. Co.,  
Chicago, Ill.  
Great Lakes Supply Co.,  
South Chicago, Ill.  
Hopson & Co., W. C.,  
Grand Rapids, Mich.  
Marshalltown Mfg. Co.,  
Marshalltown, Iowa  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio.  
Peck, Stow & Wilcox Co.,  
Southington, Conn.  
Unishear Co., The, New York, N. Y.  
Viking Shear Co.,  
Erie, Pa.  
Whitney Mfg. Co., W. A.,  
Rockford, Ill.  
Whitney Metal Tool Co.,  
Rockford, Ill.

**Torches.**  
Berns Co., Otto,  
Newark, N. J.  
Burgess Soldering Furnace Co.,  
Columbus, Ohio  
Clayton & Lambert Mfg. Co.,  
Detroit, Mich.  
Diener Mfg. Co., G. W.,  
Chicago, Ill.  
Double Blast Mfg. Co.,  
North Chicago, Ill.  
Quick Meal Stove Co.,  
St. Louis, Mo.

**Trade Extension.**  
Copper & Brass Research Association,  
New York, N. Y.  
Sheet Steel Trade Extension Committee,  
Pittsburgh, Pa.

**Transit Companies.**  
Cleveland & Buffalo Transit Co.,  
Cleveland, Ohio

**Trimnings—Stove.**  
Fanner Mfg. Co.,  
Cleveland, Ohio.

**Ventilators.**  
Arex Company,  
Chicago, Ill.  
Aeolus Dickinson Co.,  
Chicago, Ill.  
Berger Bros. Co.,  
Philadelphia, Pa.  
Friedley-Voshardt Co.,  
Chicago, Ill.  
David Lupton's Sons Co.,  
Philadelphia, Pa.  
Kernchen Co.,  
Chicago, Ill.  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.  
Royal Ventilator Co.,  
Philadelphia, Pa.  
Standard Ventilator Co.,  
Lewisburg, Pa.  
Sturtevant Co.,  
Boston, Mass.

**Ventilators—Ceiling.**  
Eaglesfield Ventilator Co.,  
Indianapolis, Ind.  
Hart & Cooley Co.,  
New Britain, Conn.  
Henry Furnace & Fdy. Co.,  
Cleveland, Ohio  
Independent Register & Mfg. Co.,  
Cleveland, Ohio  
Tuttle & Bailey Mfg. Co.,  
New York

**Windows—Steel.**  
David Lupton's Sons Co.,  
Philadelphia, Pa.

**Wire—Electrical.**  
American Steel & Wire Co.,  
Chicago, Ill.

**Wire Hoops.**  
American Steel & Wire Co.,  
Chicago, Ill.

**Wire Rope.**  
American Steel & Wire Co.,  
Chicago, Ill.

**Wrenches.**  
Coes Wrench Co.,  
Worcester, Mass.

**Zinc.**  
Merchant & Evans Co.,  
Philadelphia, Pa.  
New Jersey Zinc Co., The,  
New York, N. Y.

Mention AMERICAN ARTISAN in your reply—Thank you!



## WANTS AND SALES

Any yearly subscriber to AMERICAN ARTISAN may insert advertisements of not more than fifty words in our Want and Sales Columns WITHOUT CHARGE.

Such advertisements, however, must be limited to help or situation wanted, tools or equipment for sale, to exchange or to buy, business for sale or location desired.

## BUSINESS CHANCES

**LIGHTNING RODS**—Dealers who are selling Lightning Protection will make money by writing us for latest Factory to Dealer Prices. We employ no salesmen and save you all overhead charges. Our Pure Copper Cable is endorsed by the Mutual Insurance Companies and hundreds of reliable dealers. Write today for samples and prices. L. K. DIDDIE CO., Marshfield, Wis.

**For Sale**—Sheet metal and furnace shop. Fully equipped. Established 23 years. Busy all year around. Do \$10,000 to \$12,000 per year. Good location. I have accumulated a fortune and have reached the age where I do not care for business. This is a splendid chance for someone who understands the business. \$2,000 takes it. I can furnish all the references required, banks or supply houses. Address X-55, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 10-3t

**For Sale**—A half interest in the best and fastest growing sheet metal kitchen equipment shop on the Pacific Coast. In a city of \$50,000; no end to the trade. Doing a business of \$20,000; can be enlarged to \$50,000 in the next two years. This is too large for my capital and management; must have good help and capital; \$3,500 to \$4,000 will swing this. Address X-38, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 7-3t

**For Sale**—Overstocked on brand new well-known high grade furnaces which I bought at an administrator's sale. Will sell at the following prices, as long as stock lasts. These prices are about 25 per cent below the manufacturer's net price. No. 240, \$75 each; No. 248, \$110 each; No. 363, \$64 each; No. 863, \$70 each; No. 372, \$85 each; f. o. b. Hammond, Indiana. Write H. M. Maginot Sales Co., 174 Fayette Street, Hammond, Indiana. 10-3t

**For Sale**—Sheet metal and auto radiator work. Located in city of 30,000 population, in central Wisconsin. Machines, stock and tools inventories \$1,425.00 \$1,200.00 buys it if taken at once. Selling on account of other business. One-half cash down, balance paid off on monthly payments. Address B-51, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 9-3t

**For Sale**—Account of poor health doctor orders change of climate, so will sacrifice business. Will sell or lease building and tinner's tools. Well established business, 22 years operated. Good location. City of Des Moines, population 160,000. Will trade for Denver or Colorado property or business. Write Northwestern Tin Shop, 506 East Walnut Street, Des Moines, Iowa. 10-1t

**For Sale**—Retail hardware store. Located in good town of about 1000. Good rich farming country. Stock will invoice about \$11,000, building rents complete with fixtures. Have tin shop complete with tools. Will sell on good terms. Address Box X-43, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 8-3t

**Plumbing Business**—Ohio city, 8,000; earning \$10,000 year net. Fixtures and equipment value \$6,500; stock, approximately \$20,000. Owner selling account other business. Might retain part interest with hustler. Require \$13,000 cash, balance terms. Mielke Brothers, Danville, Illinois. 10-1t

## BUSINESS CHANCES

**For Sale**—Tin and warm air furnace shop in town of 6000 population, doing good business, one other shop in town. Reason for selling, wish to engage in other business. Stock and tools will invoice about \$900.00 or \$950.00. If interested address Glenn D. George, York, Nebraska. 8-3t

Send \$2.00 for pattern and directions for making roof saddle for chimneys. Made out of one sheet of galvanized iron and 2 hours' time and sells easily at \$4.50. When once used, carpenters and masons will use no other method as it saves its price in labor. Address G. A. Slipma, Hospers, Iowa. 2-3t

**For Sale**—Sheet metal shop. Stock and tools less than \$2,000. Rent \$25 month. Established. Only shop in town of 7,000 population. Good paying business. Best of reasons for selling. Write or come to J. H. Hopkins' Tin Shop, 1420 Locust St., Eldorado, Illinois. 9-3t

**Hardware Store**—Indiana town 1,200 Did \$28,000 business in 1925; better this year. Light overhead. Owner retiring. Fixtures \$1,500 and good stock at invoice about \$10,000. Mielke Brothers, Danville, Illinois. 10-1t

**For Sale**—Fully equipped plumbing, heating and tin shop. Reasons for selling on account of husband's death. Will sell at a real bargain. Address Mrs. D. E. Schrader, Charles City, Iowa. 9-4t

**For Sale**—Sheet Metal Shop. Plenty of work all year around. Good suburb near Chicago. Address B-50, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 9-3t

**For Sale**—Fully equipped sheet metal shop in fastest growing city in California. Santa Monica Sheet Metal Works, 122 Broadway, Santa Monica, California. 10-3t

**For Sale**—80 acres of good land for sale or trade for tin shop, stock of hardware. Address Box 543, Pierre, South Dakota. 8-3t

## HELP WANTED

**Wanted**—A first-class tinner and furnace man in town of 3,000 inhabitants. One that can take charge of shop. Steady place year around. Must be a good workman. The town has five churches, M. E. Church, Universal Congregation, Christian and Catholic. Two grade schools, high and college. A modern town, all the downtown streets newly paved and well lighted. We work 9 hours and pay \$35 per week. Address Shipplett-Moloney Co., Abingdon, Illinois. 9-3t

**Wanted**—Foreman for gas range department. Must be experienced and able to take charge of all assembly and mounting. State experience and name companies associated, with length of service, together with salary expected. Address X-40, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 7-3t

**Wanted**—A real first class all around mechanic, experienced in all kinds of general job and furnace work, gutters, tin roofs, etc. Steady work at good wages if you can deliver. Send age and references. Address X-42, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 8-3t

**Bookkeeper Wanted**—Should be one who has had hardware experience. State age, salary expected, church preference and other important information in first letter. Direct it to the Schlafer Hardware Company, Appleton, Wisconsin, attention of Mr. George Nixon. 9-3t

**Wanted**—Experienced mechanic, competent to make galvanized iron and copper specialties, light work and permanent job for elderly man with first class mechanical training. State ability and wages wanted. Address Box 147, Comfort, Texas. 9-3t

**Wanted**—All around first class tinner and furnace man, one who can draft out own patterns. Must have good references. Steady job for right man. Address X-53, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 10-3t

**Wanted**—Tinner to take entire charge of shop. Must have small amount of capital to invest. A real opportunity for a hustler, with old established concern. Address X-56, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 10-1t

## HELP WANTED

**Wanted**—First class tinner and skylight makers, who are above the average in ability and can come at once. Plenty of work. Steady job. \$1.25 per hour. Must be steady, competent workmen. Address Box 1936, St. Petersburg, Florida. 8-3t

**Wanted**—At once, six first class sheet metal workers. Must be fast and accurate. \$1.00 per hour 10 hours per day. Address Frank Barnes, Sheet Metal Works, Greenville, Mississippi. 8-3t

**Wanted**—A live salesman for a high grade steel furnace. Call on dealers only. Chicago territory. Permanent position. Address X-44, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 8-3t

**Wanted**—Capable hardware clerk in suburb of Chicago. Must be sober and reliable. A-1 position for right party. Give references. Address X-46, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 8-3t

**Wanted**—At once, a man that can do work that comes in a country tin shop. Also some knowledge of plumbing. I will pay \$30 per week the year around for this kind of man. Address O. L. Doward, Mt. Morris, Illinois. 9-3t

**Wanted**—At once, furnace installer or sheet metal worker in town of 13,000. State age, experience, wages wanted and how soon you can get on job in first letter. Address C. F. Toig & Son, 238 Broadway, Waukesha, Wisconsin. 8-3t

**Wanted**—Salesman to sell Gilt-Edge furnaces. Address X-45, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 9-3t

**Wanted**—Plumber and fitter, steady position for competent man. Answer, giving experience. Address Charles Soames, Peru, Indiana. 8-3t

**Wanted**—First-class tinner and furnace man at once. Work year around for right man. Address Wm. Smith, Sheet Metal Works, Geneva, Illinois. 9-3t

**Wanted**—At once, an experienced all around sheet metal worker and furnace man. Address M. G. Coffey, Polo, Illinois. 10-3t

## SITUATION WANTED

**Situation Wanted**—On account of bank closing, I am open for a good steady job as tinner and plumber. Have had 25 years experience in the trades. Am 38 years old, married, and am an all around man who can take full charge of shop. Have been in business for myself the last 5 years. Prefer location in South Dakota, Nebraska, or Iowa. If you are interested in a first class man state wages and hours. Address Lee O. Bailey, Titze Building, Main Street, Parkston, South Dakota. 7-3t

**Situation Wanted**—By sheet metal worker of over 15 years' experience in general lines. A thorough shop mechanic and good pattern cutter in cornice, heating and special work. Neat and accurate. Can take charge if required. Address, with full particulars, B-49, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 9-3t

**Situation Wanted**—Sheet metal worker and furnace man wants situation in small country town with hardware store. Can estimate, figure and cut own patterns. Can come at once. Location and wages not considered. Looking for steady place. Address "Tinner," 1657 Delhi St., Dubuque, Iowa. 9-3t

**Situation Wanted**—By married man, all around mechanic. Can figure and estimate work or sell, also keep books. Have had experience in hardware line. Would like working interest. Southern Michigan preferred. Address X-54, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 10-3t

**Situation Wanted**—By first-class tinner and furnace man. Do all ordinary drafting or pattern cutting, handle gravity warm air heating in any capacity. Experienced in both country town and city work. 33 years of age, 17 years' experience, married. Good habits. Address J. D. Grace, King City, Missouri. 8-3t

**Situation Wanted**—Plumber, steam fitter with some knowledge of tinning wants steady position. Married. Will go anywhere. State particulars as to wages and housekeeping rooms. Wire or write William Gross, 205 W. Seventh St., Tama, Iowa. 9-3t

Mention AMERICAN ARTISAN in your reply—Thank you!

## SITUATION WANTED

**Situation Wanted**—By an experienced tinner, hardware clerk, furnace workman and some plumbing. Country hardware store and shop preferred. Reasonable salary or percentage basis. Address Tinner, 7215 West Main Street, Washington Missouri. 6-3t

**Situation Wanted**—First class tinner, plumber and furnace man would prefer a hardware store. Can do anything that comes in any shop. Would like a year around position. State wages in first letter. Address Box 436, Mandan, North Dakota. 10-3t

**Situation Wanted**—By first class tinner and furnace man. 27 years' experience, nothing but steady job considered. Please state wages, etc., in first letter. Address B. J. Hawkins, 425 N. 4th Street, Iron River, Michigan. 8-3t

**Situation Wanted**—Experienced tin and sheet metal worker and hot air furnace man. Have had 30 years' experience. Prefer work in Iowa, Wisconsin or any midwestern state. Address P. O. Box 284, Clermont, Iowa. 10-3t

**Situation Wanted**—By a practical all around sheet metal worker with 25 years' experience. Michigan or Illinois preferred. Address P. S. McGuffin, 1214 First Street, Detroit, Michigan. 8-3t

**Situation Wanted**—Plumber and steam-fitter, exclusively, wants steady work. married. Will go anywhere. Address John L. Cornford, General Delivery, Belvidere, Illinois. 10-3t

## TINNERS' TOOLS

**Wanted**—8 or 10 ft. cornice brake. 30 or 36-inch squaring shears and groover, turning and burring machine in good condition. Address X-41, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 8-3t

**Wanted**—Will pay cash for brake and square shears in good shape. Also anything in the line of sheet metal tools that you may have with this. Address Mr. Budd, 266 Fayette St., Hammond, Indiana. 9-3t

**Wanted**—One pair of used sixty inch rollers to take care of 10 gauge and lighter. Address B-52, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 9-3t

**Wanted**—Complete set of tinner's tools, excepting brake. Also set of roofing tools. Address X-45, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 8-3t

**Wanted**—Second-hand Press for small sheet metal specialties. 26 gauge and lighter. Electric power. State make condition and lowest cash price. Address Box 147, Comfort, Texas. 9-3t

## BOOKS

**The Ventilation Handbook**, by Charles L. Hubbard. A practical book designed to cover the principles and practice of ventilation as applied to furnace heating; ducts, flues and dampers for gravity heating; fans and fan work for ventilation and hot blast heating by means of a comprehensive series of questions, answers and very plain descriptions easy to understand. Price \$2.00. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

**Sheet Metal Duct Construction**, by Neubecker—A treatise on the construction and erection of heating and ventilating ducts, including the cutting and forming of the metal, the laying out of the elbows, etc. A practical expert wrote this book and you'll find that it covers the subject thoroughly. By William Neubecker. Bound in cloth, 194 pages, 217 illustrations. Size 5½x8¼ inches. Price \$2.00. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

**Essentials of Sheet Metal Work and Pattern Drafting**, by Professor J. S. Daugherty—Invaluable to the sheet metal worker, contractors and instructor, as well as an elementary and advance course for vocational and trade school students and apprentices. Some of the subjects covered are pattern cutting, soldering, edging, wiring, radial line development, pipes, elbows, miters, pitched covers and flaring articles, pipe intersections and tee joints. 181 pages, substantially bound in blue cloth; profusely illustrated. Price \$1.50. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

## BOOKS

**Sheet Metal Workers' Manual**—A new book produced by the combined efforts of L. Broemel, a practical man, and the late Professor J. S. Daugherty, instructor in Sheet Metal Work at the Carnegie Institute of Technology, Pittsburgh. Pattern drafting is its biggest feature; not only tells how to make the pattern, but how to develop it with modern machines and tools; gives valuable assistance on soldering, brazing, welding, crimping, beading, straight, circular and irregular cutting, in fact covers every angle of the trade. Bound in leatherette; 500 pages; more than 400 pen drawings and illustrations. Price \$2.00. Order from Book Dept., AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

## SPECIAL NOTICES

**The Rate for Special Notices**  
— displayed want ads —  
**\$3.00 per inch per insertion.**

## PATENTS

HUBERT E. PECK

Patent Attorney

Barrister Bldg., WASHINGTON, D. C.

## FURNACE SALESMEN

Good territory open for progressive salesmen on an established line of quality furnaces. A popular line wherever sold. Can be carried with stoves and ranges or other items used in hardware and sheet metal trade. You can net attractive earnings on commission basis. Write

Mt. Vernon Furnace & Mfg. Co.  
Mt. Vernon, Illinois 7-3t.

## WANTED

Superintendent for sheet metal shop in Central Illinois employing a large force of men. Must be qualified to take entire charge of Estimating, Selling, Installing all classes of Sheet Metal Work and Roofing, also Warm Air Furnaces, Address L-74, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois.

5-4t.

## WANTED

We need three or four more practical furnace installers in our Retail Department at Syracuse. We want men competent to install warm air heating plants in a workmanlike manner. Steady employment to those who can make good on the job. Write or wire the Lennox Furnace Company, Syracuse, New York. 5-1t.

Mention AMERICAN ARTISAN in your reply—Thank you!

## SPECIAL NOTICES

### WANTED

A live wire salesman for a high grade quality furnace that is more than a heating plant. We want the salesman who can secure results from the dealer trade. All correspondence held in strictest confidence. Address L76, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 7-2t

### STOVE SALES EXECUTIVE

**Wants Connection**

Widely experienced and thoroughly reliable sales executive of large stove company desires a worth-while connection in the stove or furnace field. Steady producer and builder of good clean business. Address L-77, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 7-3t

We can use a few Duplex Registers 30"x30"x22" Collars. Security Stove and Manufacturing Company, 17th and Oakland, Kansas City, Mo.

5-1t.

### UNISHEAR REPRESENTATIVES

and salesmen with own car to co-operate with our exclusive distributors in Chicago, Northern Illinois, Northern Indiana, Southwest Michigan. Strict but liberal commission plus bonus. Splendid opportunity for advancement in our organization. Apply to Maplewood Machinery Company, 2638 Fullerton Avenue, Chicago, Illinois, or our branch, 79 South Water Street, Milwaukee, Wisconsin.

Unishear Co., Inc.  
New York, N. Y. 7-3t.

### FOR SALE

#### PATENTED PRACTICAL FURNACE PIPING SYSTEM

for hot air furnaces which has been proved successful during the past 15 years. Also patented fishing tackle. Address J. Subert, care Practical Furnace Pipe Co., 1516 S. Euclid Avenue, Oak Park, Illinois. 10-1t

### WANTED

Several experienced range salesmen to sell our high quality, low priced ranges. Established 23 years. Openings in Iowa, Nebraska, Wisconsin, Minnesota, North and South Dakota. Good references required. Commission basis. No advancements. Write or call on Gary Gohmann, 965 Second Ave., W., Cedar Rapids, Iowa. 10-2t

### FURNACE MANUFACTURERS!

Situation wanted by a real furnace man who knows the furnace manufacturing business from A to Z. Have worked on both sides of the counter in the furnace business—inside, directing the policies of the company, and outside, doing bare-handed selling.

I want to get back into the furnace and know that I can produce real business for a manufacturer of a good furnace.

Let me hear from you. Address L-78, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 10-4t



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electrical, rope, barbed, plain, nails (bright and coated), tacks, spikes, bale-ties, hoops, springs, netting, wire fences, steel posts, steel gates, trolley wire, rail bonds, flat wire—cold rolled strip steel, piano wire, round and odd-shaped wire, screw stock, concrete reinforcement. Aerial Tramways.

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Be sure the letter  is on all your punches and dies. They are made in our own factory and are genuine.

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This Forming Roll is built in all standard sizes, with our Patented Opening Device by means of which it is opened and closed in a few seconds.

We build a complete line of Shears and Punches, all sizes, for hand or belt power.

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Branch Warehouses in New York, Philadelphia, Cincinnati & Chicago  
Member, Copper & Brass Research Association

*THE learning and knowledge that we have is, at the most, but little compared with that of which we are ignorant.*

—PLATO

*Good trade books will without a doubt help you to increase your practical knowledge of your trade. We sell good trade books.*

—AMERICAN ARTISAN

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FOR the customer who wants a Screw Wrench to do all sorts of work—to stand up under all kinds of strains—the Coes Steel Handle is the kind to sell.

An all-steel wrench, properly heat treated, wearing parts hardened.

The ideal wrench for "all-round rough use."

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# STEEL HANDLE

Send good cheer to your customers and friends by the Mailman

OUR Line includes hundreds of individual cards and folders for business and personal use. New and distinctive; sold with or without your name engraved. Submit your last year's

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Manhattan Building, Chicago.

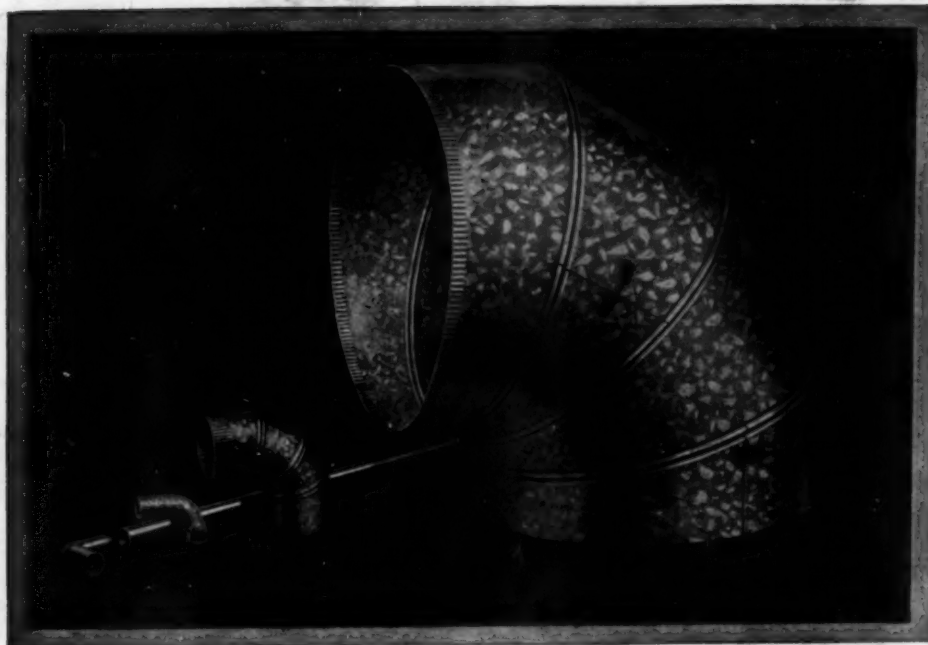
WE are interested in Holiday Greeting cards. Let us hear from you. WE use ☐ Personal ☐ Business

Name .....

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Say It With A Xmas Card





## Yes! We have **MILCOR** ELBOWS

**L**UCKY the sheet metal man who can always say that — lucky because that insures satisfaction and encourages repeat business. Lucky the buyer to whom you say that — because when he gets Milcor Elbows he is assured of maximum service. He is getting elbows that fit fine — full size, full weight, and absolutely uniform — packed so they will reach the job in as fine condition as when they left the modern Milcor daylight factories — designed and manufactured to stand the gaff of strenuous service.

Your trade appreciates genuine quality. Let them have Milcor Elbows —

**For All Types of Pipes**  
**Onepiece Conductor Pipe Elbows**  
**Adjustable Furnace Pipe Elbows — Onepiece and**  
**Adjustable Stove Pipe Elbows**  
**Speaking Tube Elbows**

No conductor pipe, stove pipe or furnace pipe job is better than its elbows. They are the most vulnerable parts of each installation. They can make or break your reputation. Safeguard your business — concentrate on Milcor Elbows.

Metals used: Terne Plate, Steel, Coppered Metal, Wilder Metal, Zinc, Copper or rust-resisting



The Milcor Trade Mark is recognized as the "Grade Mark" of A-1 quality. More Milcor Elbows, Eaves Trough, Conductor Pipe and Trimmings are used, year after year, than any other kind. Milcor products insure satisfaction and repeat business.

It's easy to get Milcor Products from leading jobbers or from any of our four plants at Milwaukee, Chicago, Kansas City or La Crosse. "Same Day Service" on all stock items.

**MILWAUKEE CORRUGATING COMPANY, Milwaukee, Wis.**  
**CHICAGO, ILL. KANSAS CITY, MO. LA CROSSE, WIS.**

# MILCOR

## ELBOWS

for all types of pipes



**Packed securely  
for Safety and Convenience.**

### MILCOR

Onepiece Galvanized Flatcrimp Elbows are made in one piece, with no soldered joints. They are designed so as to allow for expansion and contraction without breaking or developing leaks. After formation they are hand-dipped in the finest galvanizing spelter known. They fit well, they are packed well — a case of quality all the way through.



Milcor Corrugated Round One-piece Galvanized Conductor Pipe Elbow — Hand-dipped after formation.



Milcor Plain Round One-piece Galvanized Conductor Pipe Elbow — Hand-dipped after formation.



Milcor Corrugated Square One-piece Galvanized Conductor Pipe Elbow — Hand-dipped after formation.

Write for prices on Milcor Elbows made from ARMCO Ingot Iron.